

N BERKELEY SENIOR CENTER ELECTRICAL AND MECHANICAL UPGRADES

1901 HEARST AVE.
BERKELEY CA 94709
PERMIT SET - 08/01/2022

CITY OF BERKELEY PROJECT REQUIREMENTS

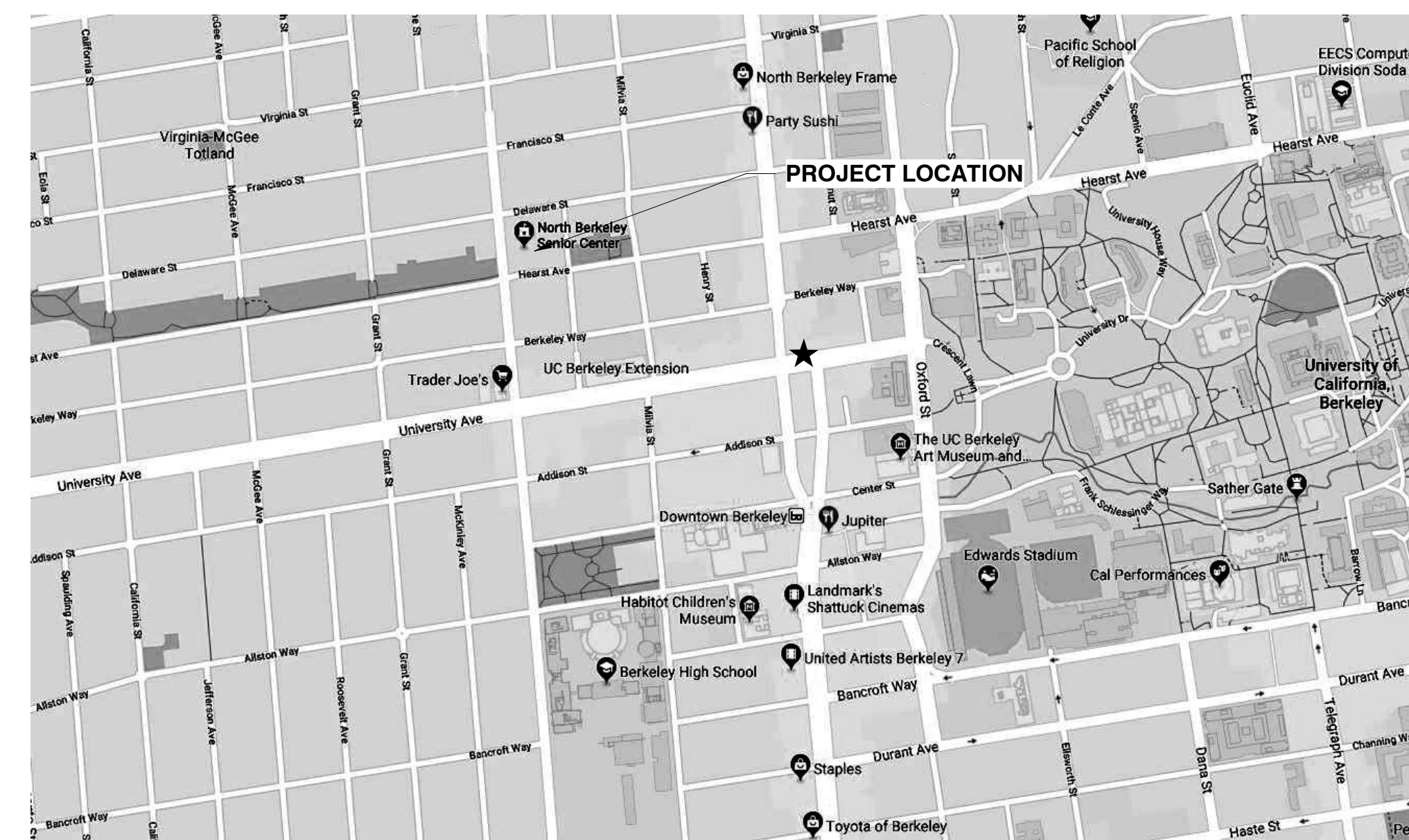
1. THIS SET OF CONSTRUCTION DOCUMENTS MUST BE KEPT ON THE PROJECT SITE AT ALL TIMES. ANY DESIGN CHANGES MADE DURING CONSTRUCTION SHALL BE RESUBMITTED FOR APPROVAL AS AN AMENDED SET OF CONSTRUCTION DOCUMENTS
2. VALIDITY OF PERMIT: ISSUANCE OF PERMIT OR APPROVAL OF PLANS SHALL NOT BE CONSTRUED AS PERMISSION TO VIOLATE ANY ORDINANCES, CODES OR LAWS OF THE CITY OF BERKELEY OR THE STATE OF CALIFORNIA. IT IS ASSUMED THE INFORMATION PROVIDED ON THE PLANS IS ACCURATE. PERMIT EXPIRES ONE YEAR AFTER DATE OF PERMIT ISSUANCE, UNLESS AN EXTENSION HAS BEEN GRANTED.
3. APPLICABLE CODES: ALL CONSTRUCTION SHALL COMPLY WITH THE APPLICABLE PROVISIONS OF THE 2019 CALIFORNIA BUILDING STANDARDS CODE (CALIFORNIA CODE OF REGULATIONS, TITLE 24) AS ADOPTED BY THE CITY OF BERKELEY (BMC TITLE 19)
4. SPECIAL INSPECTION IS REQUIRED: PROVIDE SPECIAL INSPECTION OBSERVATION AS REQUIRED PER CBC CHAPTER 17.
5. BAAQMD NOTIFICATION: THE PERMITTEE IS RESPONSIBLE TO COMPLY WITH THE REQUIREMENTS OF THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT (BAAQMD) REGULATION 11, RULE 2 PERTAINING TO DISTURBING REGULATED ASBESTOS CONTAINING MATERIALS (RACM). PLEASE CONTACT THE BAAQMD AT (415) 749-4762 OR VISIT WWW.BAAQMD.GOV FOR MORE INFORMATION
6. PSL DEFERRAL: A PRIVATE SEWER LATERAL (PSL) CERTIFICATE IS REQUIRED PRIOR TO OR AT BUILDING PERMIT FINAL INSPECTION. PSL SCOPE OF WORK SHALL BE BY OWNER. GENERAL CONTRACTOR SHALL COORDINATE AND ACQUIRE THE CERTIFICATE FROM OWNER PRIOR TO FINAL INSPECTION OF PROJECT.
7. A SEPARATE RIGHT-OF-WAY PERMIT FROM THE DEPARTMENT OF PUBLIC WORKS IS REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT OF WAY
8. FIRE PREVENTION: A SEPARATE FIRE PERMIT IS REQUIRED FOR ANY ALTERNATIONS/MODIFICATIONS TO THE FIRE SPRINKLER SYSTEM. A SEPARATE FIRE PERMIT IS REQUIRED FOR ANY ALTERATIONS/MODIFICATIONS TO THE FIRE ALARM SYSTEM

FIRE SAFETY INFORMATION

GENERAL CONTRACTOR AND SUBCONTRACTORS TO COMPLY WITH CFC CHAPTER 33 FOR SAFEGUARDS DURING CONSTRUCTION:

- Smoking shall be prohibited except in designated areas with approved ashtrays. All other areas must have "No Smoking" signage posted around construction areas in accordance with CFC§310. [CFC§3304.1]
- Combustible debris shall not be allowed to accumulate within building. Combustible debris, rubbish and waste material shall be removed from building at the end of each shift of work. [CFC §3304.2]
- Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. [CFC §3304.2.4]
- Operations involving the use of cutting and welding shall be done in accordance with Chapter 35. [CFC §3304.6]
- During construction, the construction site or area must be thoroughly cleaned at the end of each work day in order to provide firefighter access in the building in an event of a fire.

LOCAL STREET MAP



PROJECT SUMMARY

The proposed project scope includes, but is not limited to, interior, surface-mounted electrical and data raceway upgrades to the existing building and the replacement of gas-fired kitchen appliances with electrical appliances.

The new electrical kitchen appliances will require a new, exterior mounted transformer.

The mechanical scope includes exhaust fan upgrades to the existing building HVAC system.

GENERAL NOTE: ALL (10) WAP INSTALLATIONS AND ASSOCIATED INFRASTRUCTURE INDICATED IN THESE DOCUMENTS IS REMOVED FROM THIS PROJECT'S SCOPE

**CITY OF BERKELEY
N BERKELEY
SENIOR CENTER
ELECTRICAL
AND
MECHANICAL
UPGRADES**
1901 HEARST AVE.
BERKELEY CA 94709

BID SET

ISSUE DATE 03/15/2024

N&T JOB # 21740

REVISIONS

DATE	DESCRIPTION

SHEET TITLE

COVER SHEET

SHEET NUMBER

G0.00

Electrical

O'Mahony & Myer Inc.
4341 Redwood Highway
Suite 245
San Rafael CA 94903
Tel: (415) 492-0420

MEP

EPCE Inc
275 Devonshire Street
Vallejo CA 94591
Tel: (707) 980-4049

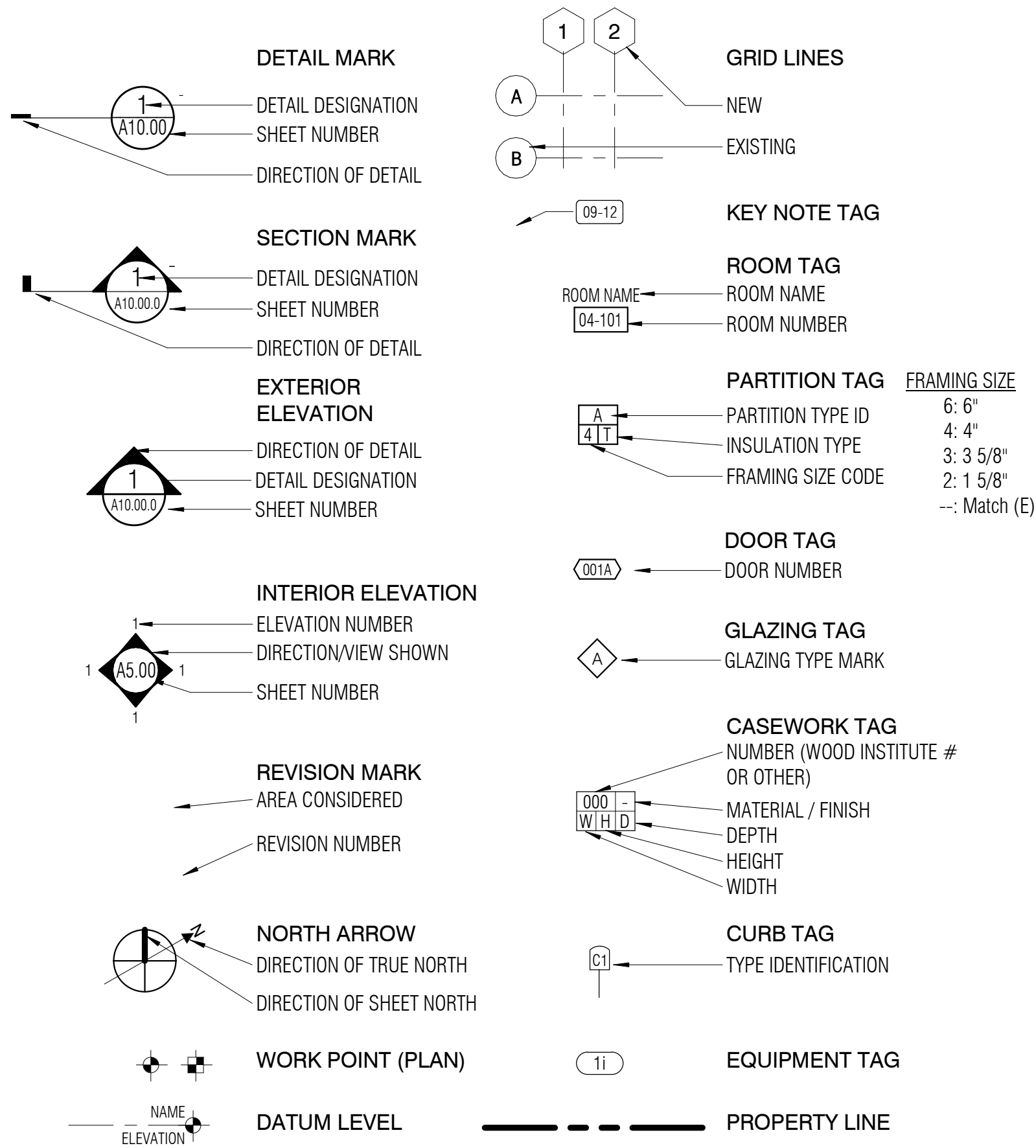
Architect

Noll & Tam Architects
729 Heinz Ave
Berkeley, CA 94710
Tel: 510.542.2200
Fax: 510.542.2201

Client

City of Berkeley
Public Works Department
1947 Center Street
Tel: (510) 981-6300

SYMBOLS LEGEND



GENERAL NOTES

- ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PROJECT SPECIFICATIONS.
- ALL WORK SHALL MEET OR EXCEED THE MINIMUM STANDARDS OF THE 2016 CALIFORNIA BUILDING CODE AND ALL APPLICABLE CODES AND ORDINANCES ADOPTED BY THE CITY OF BERKELEY.
- INFORMATION CONTAINED WITHIN THESE DOCUMENTS SHALL NOT BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE APPLICABLE CODES.
- CONTRACTOR SHALL EXAMINE THE DOCUMENTS AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES WHICH MAY BE FOUND PRIOR TO THE START OF WORK.
- CONTRACTOR SHALL REVIEW THE (E) BLDG CONDITIONS. ANY VARIATIONS AND/OR DISCREPANCIES FROM THE BID DOCUMENTS THAT ARISE IN THIS REVIEW ARE TO BE BROUGHT IMMEDIATELY TO THE OWNER AND ARCHITECT'S ATTENTION.
- THE CONTRACTOR AND ALL SUBCONTRACTORS ARE REQUIRED TO VISIT AND INSPECT THE SITE PRIOR TO CONSTRUCTION OR ORDERING ANY MATERIALS.
- ALL DETAILS, SCHEDULES, ADDENDA AND SPECIFICATIONS BOUND SEPARATELY ARE A PART OF THE CONTRACT DOCUMENTS.
- ITEMS MARKED "NIC" ARE NOT IN CONTRACT. SUCH ITEMS ARE INCLUDED IN THE DOCUMENTS WHEN CONTRACTOR'S COORDINATION IS REQUIRED OR FOR CLARIFICATION OF PROJECT LIMITS.
- DIMENSIONS:
 A. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM THE DRAWINGS.
 B. OPENINGS: DOOR DIMENSIONS ARE TO THE FACE OF JAMB, UON. LOCATE UNDIMENSIONED DOORS 4" FROM FINISHED FACE OF INTERSECTING PARTITION TO HINGE EDGE OF DOOR. REFER TO DETAILS FOR LOCATION OF DIMENSIONS OF WINDOWS AND OTHER OPENINGS
 C. ALL DIMENSIONS TO WALLS ARE TO THE FACE OF STUD, UON.
 D. CEILING HEIGHT DIMENSIONS ARE FROM FINISHED FLOOR TO FINISHED FACE OF CEILING, UON.
 E. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD BY GENERAL CONTRACTOR AND ALL SUBCONTRACTORS PRIOR TO PROCEEDING WITH CONSTRUCTION.
 F. COORDINATE WITH EQUIPMENT CONTRACTORS FOR ROUGH-IN DIMENSIONS AND TEMPLATES.
 G. ALL DIMENSIONS NOTED "CLEAR" OR "CLR" MUST BE STRICTLY MAINTAINED. "CLEAR" MEANS DIMENSION FROM FACE OF FINISH TO FACE OF FINISH OR OBJECT.
 H. ALL DIMENSIONS NOTED "VERIFY" OR "VIF" ARE TO BE CHECKED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY VARIANCE FROM THE REQUIRED DIMENSIONS MUST BE BROUGHT IMMEDIATELY TO THE ARCHITECT'S ATTENTION.
- DETAILS MARKED "TYPICAL" SHALL APPLY IN ALL CASES, UON.
- WHERE NO SPECIFIC DETAIL IS SHOWN, THE FRAMING OR CONSTRUCTION SHALL BE IDENTICAL OR SIMILAR TO THAT INDICATED FOR LIKE CASES OF CONSTRUCTION ON THE PROJECT.
- EXISTING CONDITIONS TO REMAIN, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL MEET w/ THE OWNER AND ARCHITECT PRIOR TO THE START OF DEMOLITION TO NOTE WHAT ITEMS, IF ANY, ARE TO BE SALVAGED OR REUSED. REFER TO DIVISION 1 OF THE PROJECT SPECIFICATIONS.
- THE DRAWINGS INDICATE THE GENERAL EXTENT OF (N) CONSTRUCTION NECESSARY FOR THE WORK, BUT ARE NOT INTENDED TO BE ALL-INCLUSIVE. ALL DEMO AND (N) WORK NECESSARY FOR A FINISHED JOB, IN ACCORDANCE w/ THE INTENTIONS OF THE CONTRACT DOCUMENTS, IS INCLUDED REGARDLESS OF WHETHER SHOWN IN THE CONTRACT DOCUMENTS.
- (E) BUILDING AND SITE DOCUMENTATION IS BASED ON "AS-BUILT" DRAWINGS AND OBSERVATIONAL SITE INVESTIGATIONS. ACTUAL BUILT CONDITIONS MAY VARY. CONTRACTOR IS TO USE CAUTION IN DEMOLITION, AND IS TO NOTIFY ARCHITECT IMMEDIATELY IF ANY VARIATIONS OR DISCREPANCIES ARE UNCOVERED.
- PROTECT ALL (E) BUILDING AND SITE CONDITIONS TO REMAIN.

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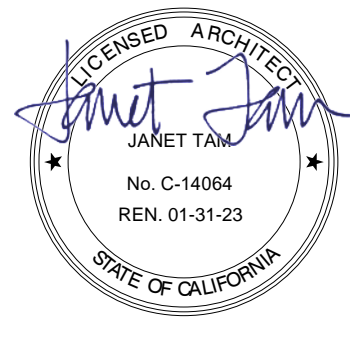
ABBREVIATIONS

&	AND	CEM	CEMENT/CEMENTITIOUS	DR	DOOR	FOS	FACE OF STUD	HT	HEIGHT	NIC	NOT IN CONTRACT	RD	ROOF DRAIN	SP	SPACE	TS	TUBE STEEL
(E)	EXISTING	CER	CERAMIC	DS	DOWNSPOUT	FR	FIRE RESISTANT/FIRE RETARDANT	HVAC	HEATING VENTILATION & AIR CONDITIONING	NO	NUMBER	REF	REFERENCE	SPA	SANDWICH PANEL ASSEMBLY	TYP	TYPICAL
(N)	NEW	CFMF	COLD FORMED METAL FRAMING	DTL	DETAIL	FRP	FIBERGLASS REINFORCED	ID	INSIDE DIAMETER	NOM	NOMINAL	REFR	REFRIGERATOR	SPD	SEE PLUMBING DRAWINGS	UON	UNLESS OTHERWISE NOTED
@	AT	CI	CAST IRON	DWG	DRAWING	INS	INSULATION	IF	INSIDE FACE	NTS	NOT TO SCALE	REG	REGISTER	SPEC	SPECIFICATION	UR	URINAL
AB	ANCHOR BOLT	CJ	CONTROL JOINT	DWR	DRAWER	FRT	FIRE RETARDANT TREATED	INC	INCANDESCENT	OA	OVERALL	REINF	REINFORCE/REINFORCING	SQ	SQUARE	VCT	VINYL COMPOSITION TILE
AC	ASPHALTIC CONCRETE	CLG	CEILING	E	EAST	FSP	FIBERGLASS SANDWICH PANEL	INCL	INCLUDE/INCLUDING	OC	ON CENTER	REQD	REQUIRED	SS	STAINLESS STEEL	VENT	VENTILATION
ACC	ACCESS	CLKG	CAULKING	EA	EACH	FT	FOOT/FEET	OD	OUTSIDE DIAMETER/OVERFLOW DRAIN	OCC	OCCUPANT	REQT	REQUIREMENTS	SSD	SEE STRUCTURAL DRAWINGS	VERT	VERTICAL
ACOUS	ACOUSTICAL	CLO	CLOSET	EJ	EXPANSION JOINT	FTG	FOOTING	OD	OUTSIDE DIAMETER/OVERFLOW DRAIN	RES	RESILIENT	RES	RESILIENT	SSGD	SEE SIGNAGE DRAWINGS	VEST	VESTIBULE
ACT	ACOUSTIC CEILING TILE	CLR	CLEAR	ELEC	ELECTRICAL	FURN	FURNITURE	INT	INTERIOR	REV	REVISION	RO	ROUGH OPENING	SSK	SERVICE SINK	VIF	VERIFY IN FIELD
AD	AREA DRAIN	CMU	CONCRETE MASONRY UNIT	ELEV	ELEVATION/ELEVATOR	FX	FIXED	JAN	JANITOR	RM	ROOM	RWL	ROUGH OPENING	SSTL	STAINLESS STEEL	W	WEST/WIDTH
ADDL	ADDITIONAL	CNTR	COUNTER	ENLG	ENLARGED	GA	GAUGE	JBOX	JUNCTION BOX	OF	OUTSIDE FACE	S	SOUTH	STD	STANDARD	W/	WITH
ADJ	ADJACENT/ADJUSTABLE	CO	CLEAN OUT	EOS	EDGE OF SLAB	GALV	GALVANIZED	JST	JOIST	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED	SASF	SELF ADHERING SHEET FLASHING	STED	SEE TELECOM DRAWINGS	W/O	WITHOUT
AESS	ARCHITECTURAL EXPOSED STRUCTURAL STEEL	COL	COLUMN	EP	ELECTRICAL PANEL	GB	GRAB BAR	JT	JOINT	OFD	OVERFLOW DRAIN	S	SOUTH	STL	STEEL	WC	WATER CLOSET
AFF	ABOVE FINISHED FLOOR	CONC	CONCRETE	EQ	EQUAL	GC	GENERAL CONTRACTOR	LAM	LAMINATE	OFF	OFFICE	OP	OPERABLE	STOR	STORAGE	WD	WOOD
AGG	AGGREGATE	CONN	CONNECTION	EQUIP	EQUIPMENT	GFI	GROUND FAULT INTERRUPT	LAV	LAVATORY	OPNG	OPENING	OP	OPERABLE	STRL	STRUCTURAL	WH	WATER HEATER
ALT	ALTERNATE	CONT	CONTINUOUS	EWC	ELECTRIC WATER COOLER	GI	GALVANIZED IRON	LB	LAG BOLT	OPP	OPPOSITE	SASM	SELF ADHERING SHEET MEMBRANE	STRUC	STRUCTURAL	WIN	WINDOW
ALUM	ALUMINUM	CONTR	CONTRACTOR	EXH	EXHAUST	GL	GLASS/GLAZING	LF	LINEAR FEET	OPP HD	OPPOSITE HAND	SC	SOLID CORE	SUSP	SUSPENDED	WO	WHERE OCCURS
ANOD	ANODIZED	CORR	CORRIDOR	EXP	EXPANSION	GLAM	GLUE LAMINATED	LKR	LOCKER	PA	PUBLIC ADDRESS	SCD	SEE CIVIL DRAWINGS	SYS	SYSTEM	WP	WORK POINT
APPROX	APPROXIMATE	CPT	CARPET	EXT	EXTERIOR	GR	GRADE	LT	LIGHT	PARTN	PARTITION	SCHED	SCHEDULE	T	TREAD	WR	WATER RESISTANT
AV	AUDIO VISUAL	CSMT	CASEMENT	FA	FIRE ALARM	GSM	GALVANIZED SHEET METAL	MAS	MASONRY	PCP	PORTLAND CEMENT PLASTER	SE	STRUCTURAL ENGINEER	T&G	TONGUE & GROOVE	WT	WEIGHT
BD	BOARD	CTR	CENTER	FD	FLOOR DRAIN	GWB	GYPSPUM WALL BOARD	MATL	MATERIAL	PL	PLATE	SEC	SECTION	TBD	TO BE DETERMINED		
BLDG	BUILDING	CTSK	COUNTERSINK	FDN	FOUNDATION	GYP	GYPSPUM	MAX	MAXIMUM	PLM	PLASTIC LAMINATE	SED	SEE ELECTRICAL DRAWINGS	TEL	TELEPHONE		
BLK	BLOCK	D	DEPTH	FE	FIRE EXTINGUISHER	H	HIGH	MB	MACHINE BOLT	PLAS	PLASTIC	SF	SUPPLY FAN	TEMP	TEMPERED		
BLKG	BLOCKING	DBL	DOUBLE	FEC	FIRE EXTINGUISHER CABINET	HB	HOSE BIB	MECH	MECHANICAL	PLY	PLYWOOD	SFRM	SPRAY-APPLIED FIRE RESISTIVE MATERIAL	THK	THICK/THICKNESS		
BM	BEAM	DEMO	DEMOLITION	FHC	FIRE HOSE CABINET	HC	HOLLOW CORE	MFR	MANUFACTURER	PR	PAIR	SH	SINGLE HUNG	THRESH	THRESHOLD		
BO	BOTTOM OF	DEPT	DEPARTMENT	FIN	FINISH	HD	HEAD	MH	MANHOLE	PROJ	PROJECT/PROJECTOR	SHT	SHEET	TJI	TRUSS JOIST		
BOT	BOTTOM	DF	DOUGLAS FIR/DRINKING FOUNTAIN	FIN FLR	FINISH FLOOR	HDR	HEADER	MIN	MINIMUM	PT	POINT/PRESSURE TREATED	SHTG	SHEATHING	TME	TO MATCH EXISTING		
BUR	BUILT UP ROOF	FLR	FLOOR	FLR	FLOOR	HDW	HARDWARE	MISC	MISCELLANEOUS	PTD	PAINTED	TO	TOP OF	TOC	TOP OF CONCRETE/CURB		
CAB	CABINET	FLRG	FLOORING	FLUOR	FLUORESCENT	HDWD	HARDWOOD	MTD	MOUNTED	PVC	POLYVINYLCHLORIDE	SIM	SIMILAR	TOP	TOP OF PAVING		
CB	CARRIAGE BOLT	DISP	DISPOSAL	FOC	FACE OF CONCRETE	HM	HOLLOW METAL	MUL	MULLION	QTY	QUANTITY	SLD	SEE LANDSCAPE DRAWINGS	TOS	TOP OF STEEL		
CE	CIVIL ENGINEER	DN	DOWN	FOF	FACE OF FINISH	HORIZ	HORIZONTAL	N	NORTH	R	RISER	SMD	SEE MECHANICAL DRAWINGS	TOW	TOP OF WALL		

NOLL & TAM ARCHITECTS

729 Heinz Avenue
 Berkeley, CA 94710
 tel 510.542.2200
 fax 510.542.2201

ARCHITECTS SEAL



CITY OF BERKELEY N BERKELEY SENIOR CENTER ELECTRICAL AND MECHANICAL UPGRADES
 1901 HEARST AVE. BERKELEY CA 94709

BID SET

ISSUE DATE	03/15/2024
N&T JOB #	21740
REVISIONS	
DATE	DESCRIPTION

SHEET TITLE
GENERAL NOTES

SHEET NUMBER

G0.01

North Berkeley Senior Center - Code Analysis

The applicable codes are the 2016 California Building Code Vol. 1 and 2, 2016 California Energy Code, 2016 California Green Building Standards, 2016 California Electrical Code, 2017 Electrical Code Errata, 2016 California Plumbing Code, 2016 California Mechanical Code, 2016 California Fire Code, 2016 California Existing Building Code.

The existing 20,756 square-foot building was permitted and constructed in 1976-1977 as a non-sprinklered, one-hour building (V-A under current code). Interior and exterior load-bearing walls meet one-hour construction criteria and exterior walls in proximity to the north and north-east property lines comply with current, two-hour construction assemblies. The floor/ceiling and roof/ceiling assemblies typically relied on one-hour rated, lay-in ceiling assemblies.

The proposed project consists of a voluntary seismic upgrade and accessibility improvements. The building has two levels. 67 square feet will be added to the first floor to accommodate shear wall additions and a reconfigured exit stair. The second floor remains at 3,946 square feet, the revised first floor area will be 16,877 square feet. Total new square footage = 20,823. The building is served by an existing 2,500-pound, hydroelectric elevator that is substantially compliant with CBC 11B-407.

The Fire Marshal has confirmed that under current code, the elevator can stay as-is per CBC 3002.4.1, 3002.4a, exception 4 and/or 5.

Current wall assembly ratings will be maintained. Floor/ceiling assemblies will be altered to meet one hour assembly criteria.

The building occupancy is mixed, but for this analysis it is classified as an A-3 "non-separated" occupancy per CBC 508.3.

Building will be fully sprinklered per 903.3.1.1 Height per CBC 504.4 = 2-stories and per 504.3 = 50 feet. Building will remain 2-stories and 25'-4" in height. Both the height in stories and in feet are code compliant for A-3 occupancy in a Type V-A building when sprinklers are used for an area increase.

Building is considered a Type VA per CBC 602.5 with primary structural frame, bearing walls, floor and roof construction to be one-hour per CBC Table 601. Though not required under current code, existing, two-hour wall construction on North and North-West property lines will be maintained. Existing ¾-hour, fire-rated steel window and door assemblies in 2-hour walls will remain where indicated. Since these walls could be 1-hour rated per current code, new windows and doors, where indicated, will be ¾-hour rated to match the existing window and door assemblies. Two steel braced frames will be exposed to view in the Multi-Purpose and Dining Room: table 601 requires 1-hour rating only at primary structure. The diagonal braces do not meet the "primary structure" definition in CBC chapter 2.

AREA MODIFICATIONS

Minimum Frontage Distance - area factor increase - 506.3.3:

Equation 5-5: $I = [360/500 - .25] 30/30 \quad I = .47$

Allowable Area - 506.2.3:

Equation 5-2: $Allowable Area = [A + (NS \times I)] \times S \quad [34,500 + (11,500 \times .47)] \times 2 \quad A = 39,905 \text{ s.f.} \times 2 = 79,810 \text{ s.f.} > 20,823 \text{ s.f. total building area}$

ALLOWABLE AREA OF OPENINGS

CBC 705.8 allows 25% unprotected, sprinklered or 25% protected openings in exterior walls within 5 to 10 feet from the property line. All North and North-East wall adjacent to property lines conform to a fire separation distance between "5 to less than 10 feet" per Table 705.8.

- Line A, Floor 1, [23%] = 1,560 s.f. total wall area with 361 s.f. existing and proposed, ¾-hour rated opening assemblies. (wall staggers from 5'-8" to 9'-8" from property line).
- Line A, Floor 2, [2%] = 871 s.f. total wall area with 22 s.f. of existing, ¾-hour window assembly. (wall is 5'-8" from property line).
- Line 5, Floor 1, [20%] = 702 s.f. total wall area with 145 s.f. of existing, ¾-hour rated opening assemblies. (wall is greater than 5'-0" from property line).
- Line C, Floor 1, [23%] = 663 s.f. total wall area with 155 s.f. of existing and new, ¾-hour rated opening assemblies. (wall is greater than 7'-9" from property line).

Required rating of exterior walls = one-hour per Table 602. New windows will be ¾-hour and bare a label marked in accordance with Table 716.3. "D-H-45". New or replaced glazing will have a "CPSC Cat. II" rating.

EXIT WIDTHS

Stairways per 1005.3.1 = 68 occupants x .3 = 20.4 inches required for each stair. Per CBC 1011.2, new rear stairway is 44 inches wide and existing main stair is 49 inches wide. Distance between exit stairs per 1007.1.1, exception #2, diagonal of second floor = 80 feet, stair separation distance = 42 feet.

Door Exit Widths per 1005.3.2 = Dining Room/Multi-Purpose occupancy = 72 occupants for each door pair x .15 inch (sprinkled building) = 11 inches. Door widths = 72 inches. Exterior exit doors:

- Doors 143A and 143B = 84 inches, 203 occupants (highest capacity), 30.45 inches required
- Door 146B, ST2A, and 115 serve lower occupant count and are all 36 inches in width.

Interior doors serving second floor A3 occupancy in room 212, 36 occupants per door pair, 6 inches required, Door widths = 72 inches.

EXISTING ELEVATOR

The existing elevator was inspected by representatives from ThyssenKrupp on 10.02.2018 and found in substantial compliance with CBC 11B-407:

- 11B-407.3 Car Dimensions**, Car has an off-center 42" clear door opening with inside car dimensions of 80 inches side to side and 54 inches front to back thus complying with this code section.
- 11B-407.3 Automatic re-opening devices** are in compliance.
- 11B-407.3.4 Door and Signal Timing** are in compliance.
- 11B-407.3.5 Door Delay** complies with the 5-second minimum.
- 11B-407.4.1 Interior Car Dimensions** are 80 inches side to side and 54 inches front to back.
- 11B-407.4.3 Platform to Hoistway Clearance** is less than 1 inch.
- 11B-407.4.4 Self-Leveling** feature complies with ½" tolerance.
- 11B-407.4.6 Car Controls** are located at 42" a.f.f.
- 11B-407.4.6.2 Buttons** are illuminated and comply with size, arrangement and shape requirements.
- 11B-407.4.6.4 Emergency Controls and Alarm** have their centers at 40" a.f.f.
- 11B-407.4.7 Designations and Indicators of car controls** have raised characters, white on black background and are located to the left of the control button.
- 11B-407.4.8 Audible and Visible Car Position** indicators are in compliance. The car is not equipped with a position indicator but there is a visual and audio directional lantern
- 11B-407.4.9 Emergency Communication** is two-way and otherwise in compliance. Alarm bell and emergency phone were tested.
- 11B-407.4.10 Support Rails** are mounted at 32" a.f.f. on three walls of the car and otherwise comply with the clearance dimensions.
- 11B-407.2.1 Call Buttons** are internally illuminated and mounted at 42" a.f.f.
- 11B-407.2.2 Hall Signals** are visible and audible and comply with Section 11B-407.2.1.5 by sounding once for up and two for down.
- 11B-407.2.3 Hoistway Signs** with floor designations, raised characters and braille are mounted on the both jambs and comply with 11B-703.3.

MINIMUM PLUMBING FACILITIES

Per California Plumbing Code 2016 Table 422.1.

Occupant Load Calculation (Table A):

Occupancy:	Occupant Load Factor	Area	Occupants	M/W
Group A-3 (Unconcentrated)	30	5,996	200	100/100
Group B (Business area)	200	11,111*	56	28/28
		Total	256	128/128

*Does not include 2,780 s.f. of circulation and storage. Note that the maximum A-3 occupancy is calculated but the Classrooms and Multi-Purpose/Dining are never used at simultaneous capacity.

Minimum Plumbing Facilities (Table 422.1):

	WC/M	WC/W	U	L/M	L/W	DF
A-3	1 : 1-100	3 : 51-100	1 : 1-100	1 : 1-200	1 : 1-100	1:1-250
200 Occupants	100/100=	100/100=	100/100=	100/200=	100/100=	200/250=
B	1 : 1-50	2 : 16-30	1 : 100	1 : 1-75	1 : 1-50	1 : 150
56 Occupants	28/50=	28/50=	28/100=	28/75=	28/50=	
	1	2	1	1	1	0
Total Required	2	5	2	2	2	1

Fixtures provided

	WC/M	WC/W	U	L/M	L/W	DF
Men/Women # 157, 161, 203 and 206	4	5	2	3	3	
Gender Neutral #105 and 151	1	1		1	1	
Drinking Fountains						3
Total	5	6	2	4	4	3

THIS PAGE INCLUDED FOR REFERENCE ONLY FROM PREVIOUS PROJECT:
BERKELEY - PLAN CHECK - August 22, 2018
Jurisdiction Appl. No. B2018-02911
TELESIS Job No. B2018-02911

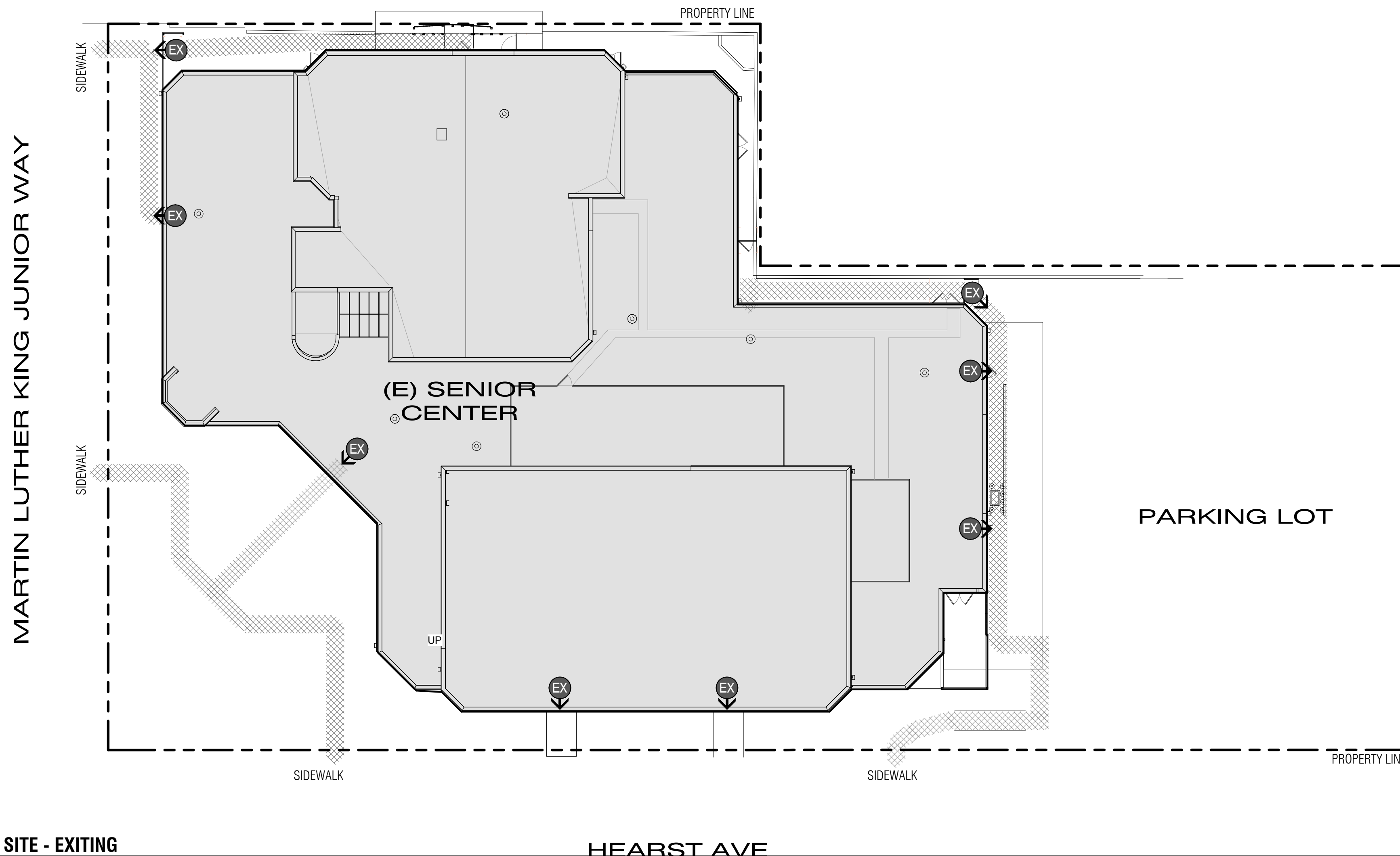
ACCESSIBLE PATH OF TRAVEL

ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS A CONTINUOUS, BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAX SLOPE, OR VERTICAL CHANGES NOT EXCEEDING 1/4" MAX AND AT LEAST 44" WIDE PER CBC SECTION 11B-403.5.1. SURFACE IS SLIP RESISTANT, STABLE, FIRM, AND SMOOTH. CROSS SLOPE DOES NOT EXCEED 1:48 AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 1:20 UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL VERIFY THAT ALL BARRIERS IN THE PATH OF TRAVEL HAVE BEEN REMOVED OR WILL BE REMOVED UNDER THIS PROJECT, AND PATH OF TRAVEL COMPLIES WITH CBC.
ALL PATHS OF TRAVEL SHALL BE ACCESSIBLE.

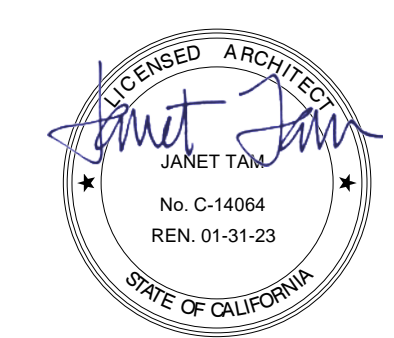
APN = 057. 205701202

SYMBOL LEGEND

- ASSEMBLY-UNCONCENTRATED
- 4000 sf
- A-3 200 o.l.f.
- 20 occ.
- OCCUPANCY TYPE DESCRIPTION
- TOTAL ROOM AREA IN SQUARE FEET
- OCCUPANT LOAD FACTOR PER CBC TABLE 1004.1.2
- TOTAL ROOM OCCUPANCY
- OCCUPANCY TYPE PER CBC TABLE 1004.1.2
- EXIT ACCESS TRAVEL DISTANCE PER CBC SECTION 1016.1
- COMMON PATH OF EGRESS TRAVEL PER CBC SECTION 1006.2.1
- EXIT DISCHARGE PER SECTION 1028
- 1- HOUR RATED ENCLOSURE
- 2- HOUR RATED ENCLOSURE
- ACCESSIBLE PATH
- EXIT PATH EVERGENCY LIGHTING W/ EMERGENCY POWER, 1F.C. MINIMUM.
- GATE WITH PANIC HARDWARE AND EXIT SIGNAGE
- DOOR W/ PANIC HARDWARE
- DOOR W/ FIRE EXIT HARDWARE
- SIGNAGE W/ POSTED OCCUPANT LOADS
- EXIT SIGN
- INDICATES WALL MOUNTING (WHEN OCCURS)
- BLACK FILL INDICATES SIDE(S) OF ILLUMINATION
- ILLUMINATED ARROW POINTING TOWARD EXIT (AS OCCURS)
- FIRE EXTINGUISHER CABINET



ARCHITECTS SEAL

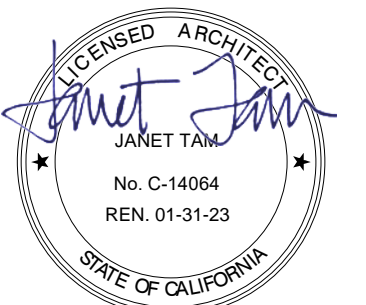


BID SET

ISSUE DATE	03/15/2024
N&T JOB #	21740
REVISIONS	
DATE	DESCRIPTION

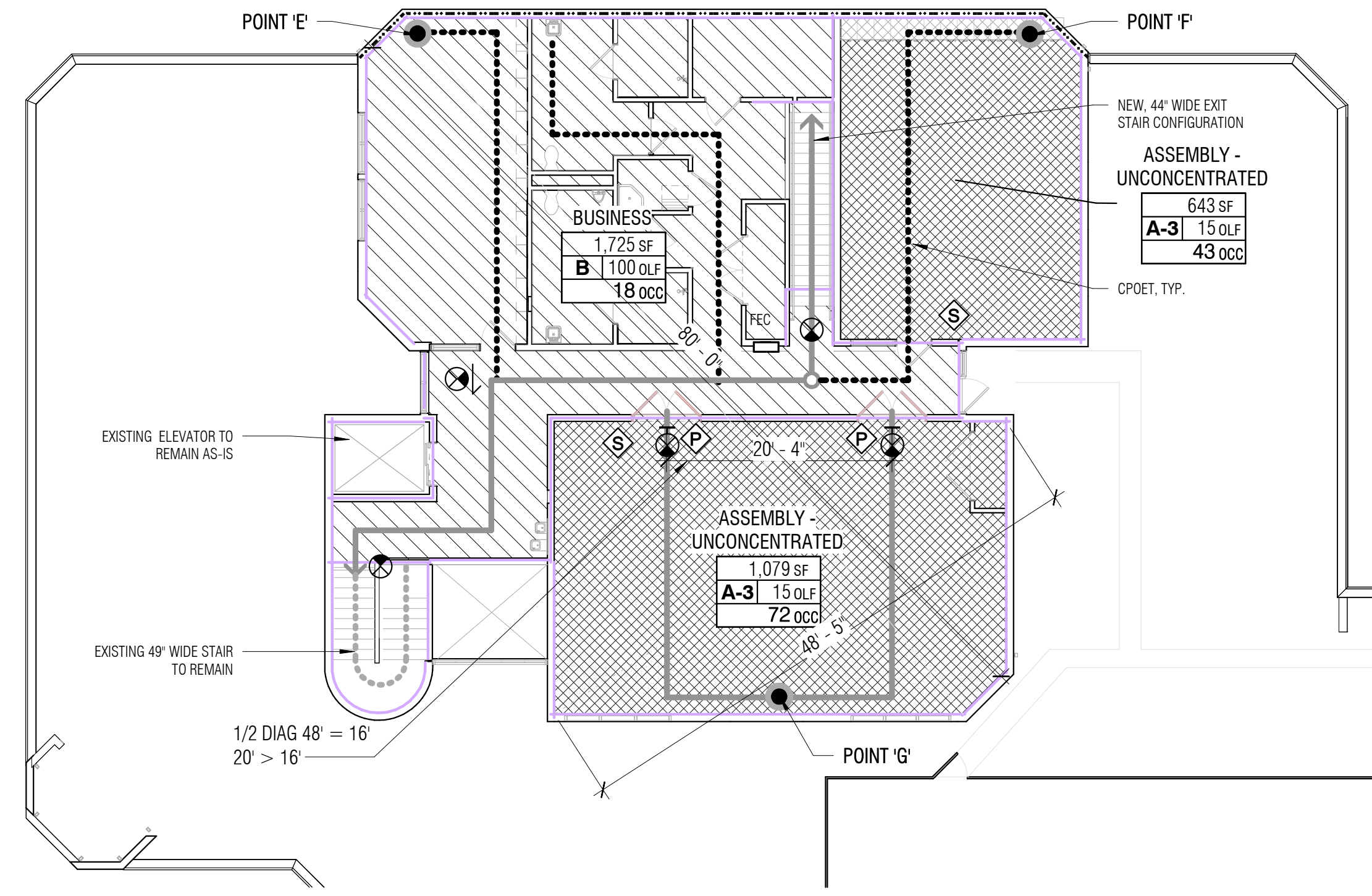
SHEET TITLE
**CODE SUMMARY AND
SITE EXIT PLAN**

SHEET NUMBER

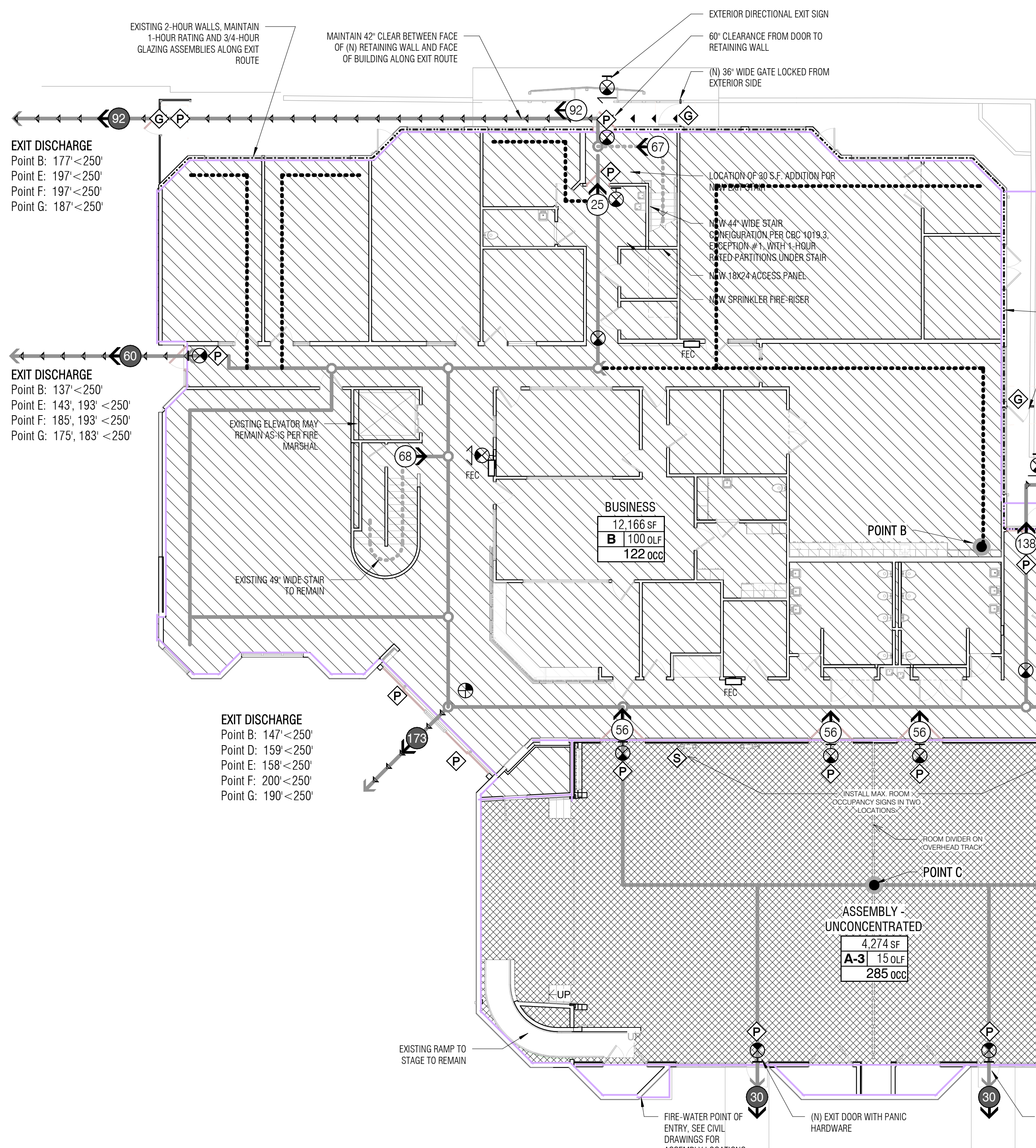


THIS PAGE INCLUDED FOR REFERENCE ONLY FROM PREVIOUS PROJECT:

BERKELEY - PLAN CHECK - August 22, 2018
Jurisdiction Appl. No. B2018-02911
TELESIS Job No. B2018-02911



2 FLOOR 2 OCCUPANCY / EXITING
G1.03 3/32" = 1'-0"



1 FLOOR 1 OCCUPANCY / EXITING
G1.03 3/32" = 1'-0"

OCCUPANCY TYPE

Occupancy Type	Description	Area (Gross SF)	Total Gross SF
A-3	ASSEMBLY AREA	4,274	GROSS SF
B	BUSINESS AREA	16,512	GROSS SF
GRAND TOTAL		20,786	GROSS SF

TOTAL OCC: 543
FL1: 407
FL2: 136

SYMBOL LEGEND

Symbol	Occupancy Type Description
[Hatched Box]	ASSEMBLY-UNCONCENTRATED
[Diagonal Lines Box]	BUSINESS
[Solid Box]	EXIT ACCESS TRAVEL DISTANCE PER CBC SECTION 1016.1
[Dashed Box]	COMMON PATH OF EGRESS TRAVEL PER CBC SECTION 1006.2.1
[Arrow Box]	EXIT DISCHARGE PER SECTION 1028
[Dotted Box]	1- HOUR RATED ENCLOSURE
[Dash-dot Box]	2- HOUR RATED ENCLOSURE
[Wavy Box]	ACCESSIBLE PATH
[Arrow with Dots Box]	EXIT PATH EVERGENCY LIGHTING W/ EMERGENCY POWER, 1F.C. MINIMUM.
[Diamond with G]	GATE WITH PANIC HARDWARE AND EXIT SIGNAGE
[Diamond with P]	DOOR W/ PANIC HARDWARE
[Diamond with F]	DOOR W/ FIRE EXIT HARDWARE
[Diamond with S]	SIGNAGE W/ POSTED OCCUPANT LOADS
[Arrow]	EXIT SIGN
[Circle with I]	INDICATES WALL MOUNTING (WHEN OCCURS)
[Circle with B]	BLACK FILL INDICATES SIDE(S) OF ILLUMINATION
[Circle with I and Arrow]	ILLUMINATED ARROW POINTING TOWARD EXIT (AS OCCURS)
[Circle with F]	FIRE EXTINGUISHER CABINET

CITY OF BERKELEY N BERKELEY SENIOR CENTER ELECTRICAL AND MECHANICAL UPGRADES

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BERKELEY CA 94709

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N&T JOB #	21740
REVISIONS	
DATE	DESCRIPTION

SHEET TITLE CODE SUMMARY AND EXIT PLAN

SHEET NUMBER

G1.03

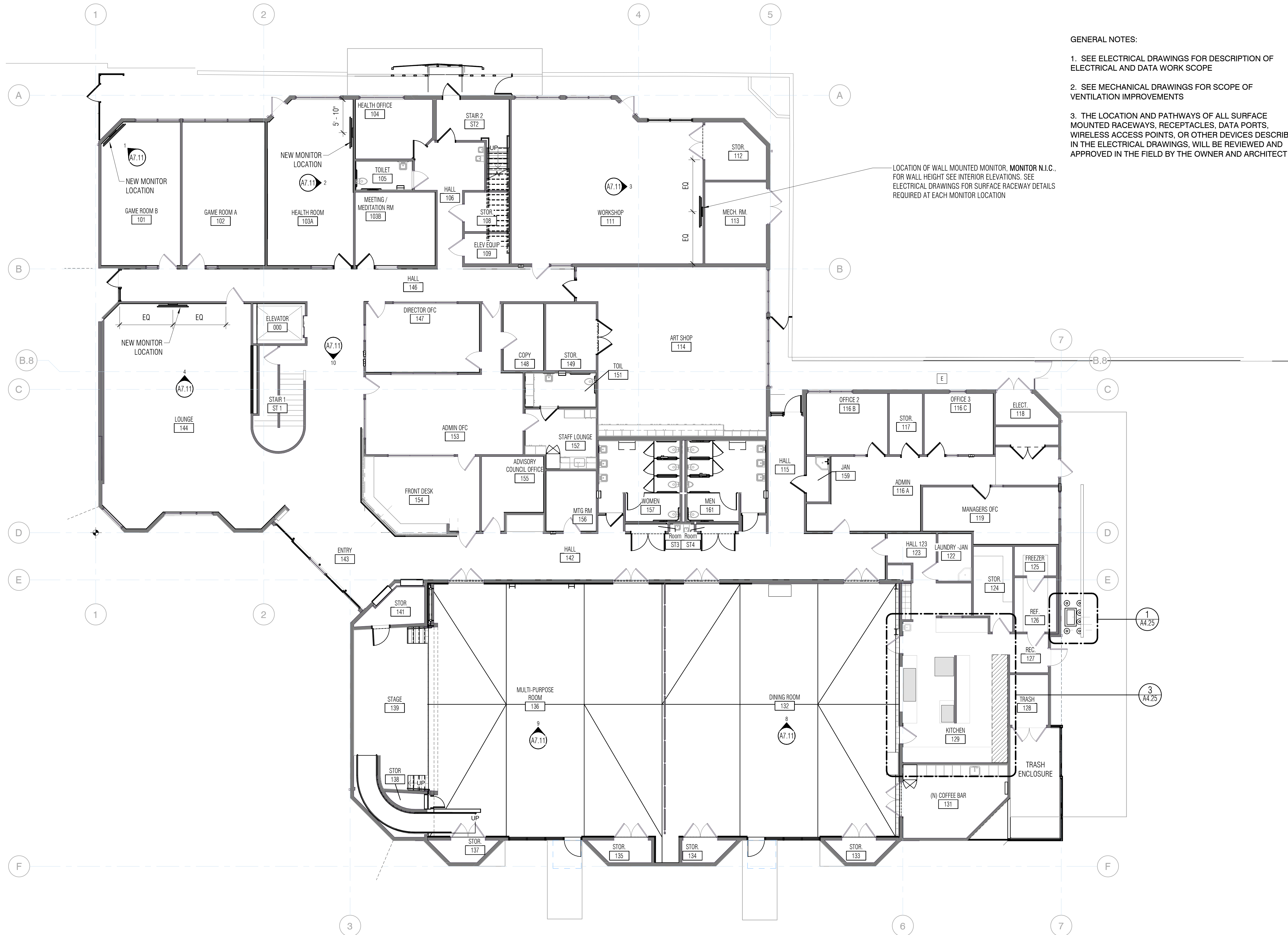
SEAL



GENERAL NOTES:

1. SEE ELECTRICAL DRAWINGS FOR DESCRIPTION OF ELECTRICAL AND DATA WORK SCOPE
2. SEE MECHANICAL DRAWINGS FOR SCOPE OF VENTILATION IMPROVEMENTS
3. THE LOCATION AND PATHWAYS OF ALL SURFACE MOUNTED RACEWAYS, RECEPTACLES, DATA PORTS, WIRELESS ACCESS POINTS, OR OTHER DEVICES DESCRIBED IN THE ELECTRICAL DRAWINGS, WILL BE REVIEWED AND APPROVED IN THE FIELD BY THE OWNER AND ARCHITECT

LOCATION OF WALL MOUNTED MONITOR, MONITOR N.I.C., FOR WALL HEIGHT SEE INTERIOR ELEVATIONS. SEE ELECTRICAL DRAWINGS FOR SURFACE RACEWAY DETAILS REQUIRED AT EACH MONITOR LOCATION



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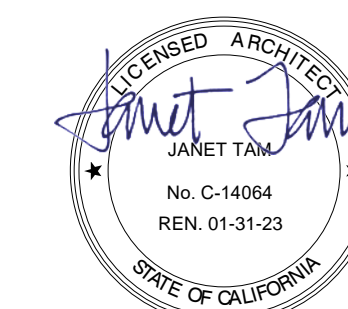
BID SET

ISSUE DATE	03/15/2024
N&T JOB #	21740
REVISIONS	
DATE	DESCRIPTION
001 7/17/19	CCD 001

SHEET TITLE
FLOOR PLAN- 1ST FLOOR

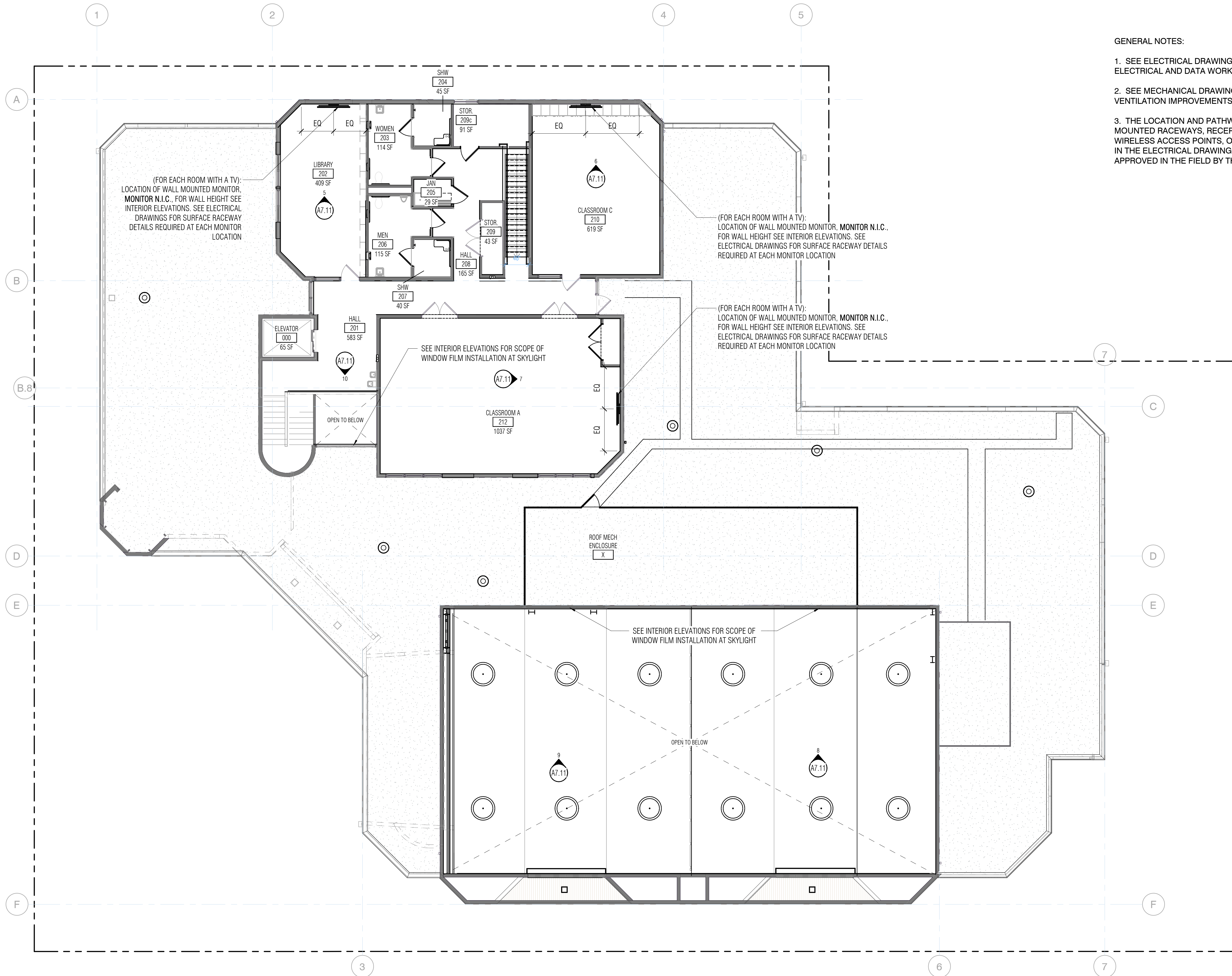
SHEET NUMBER
A2.31

SEAL



GENERAL NOTES:

1. SEE ELECTRICAL DRAWINGS FOR DESCRIPTION OF ELECTRICAL AND DATA WORK SCOPE
2. SEE MECHANICAL DRAWINGS FOR SCOPE OF VENTILATION IMPROVEMENTS.
3. THE LOCATION AND PATHWAYS OF ALL SURFACE MOUNTED RACEWAYS, RECEPTACLES, DATA PORTS, WIRELESS ACCESS POINTS, OR OTHER DEVICES DESCRIBED IN THE ELECTRICAL DRAWINGS, WILL BE REVIEWED AND APPROVED IN THE FIELD BY THE OWNER AND ARCHITECT



**CITY OF BERKELEY
N BERKELEY SENIOR CENTER
ELECTRICAL AND MECHANICAL UPGRADES**

1901 HEARST AVE.
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N&T JOB #	21740
REVISIONS	
DATE	DESCRIPTION

SHEET TITLE
FLOOR PLAN- 2ND FLOOR

SHEET NUMBER

A2.32

ARCHITECTS SEAL



CITY OF BERKELEY N BERKELEY SENIOR CENTER ELECTRICAL AND MECHANICAL UPGRADES

1901 HEARST AVE.
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ISSUE DATE 03/15/2024

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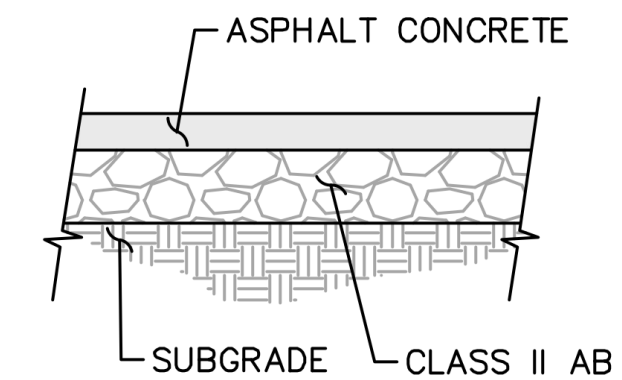
REVISIONS	
DATE	DESCRIPTION

SHEET TITLE
**ENLARGED PLANS
AND DETAILS**

SHEET NUMBER

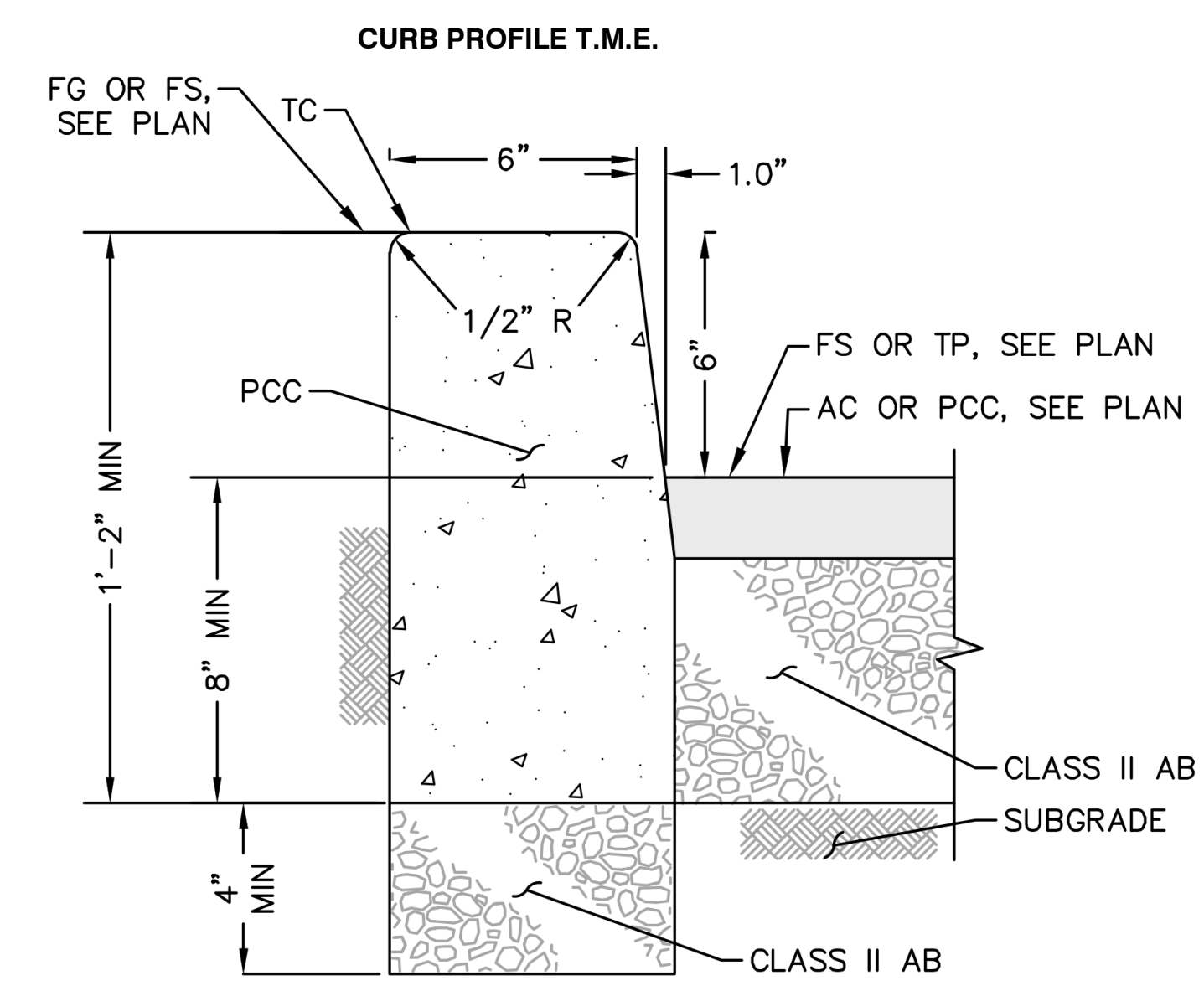
A4.25

ASPHALT PATCH TO CONFORM TO (E) AND ADJACENT FINISH ELEVATIONS

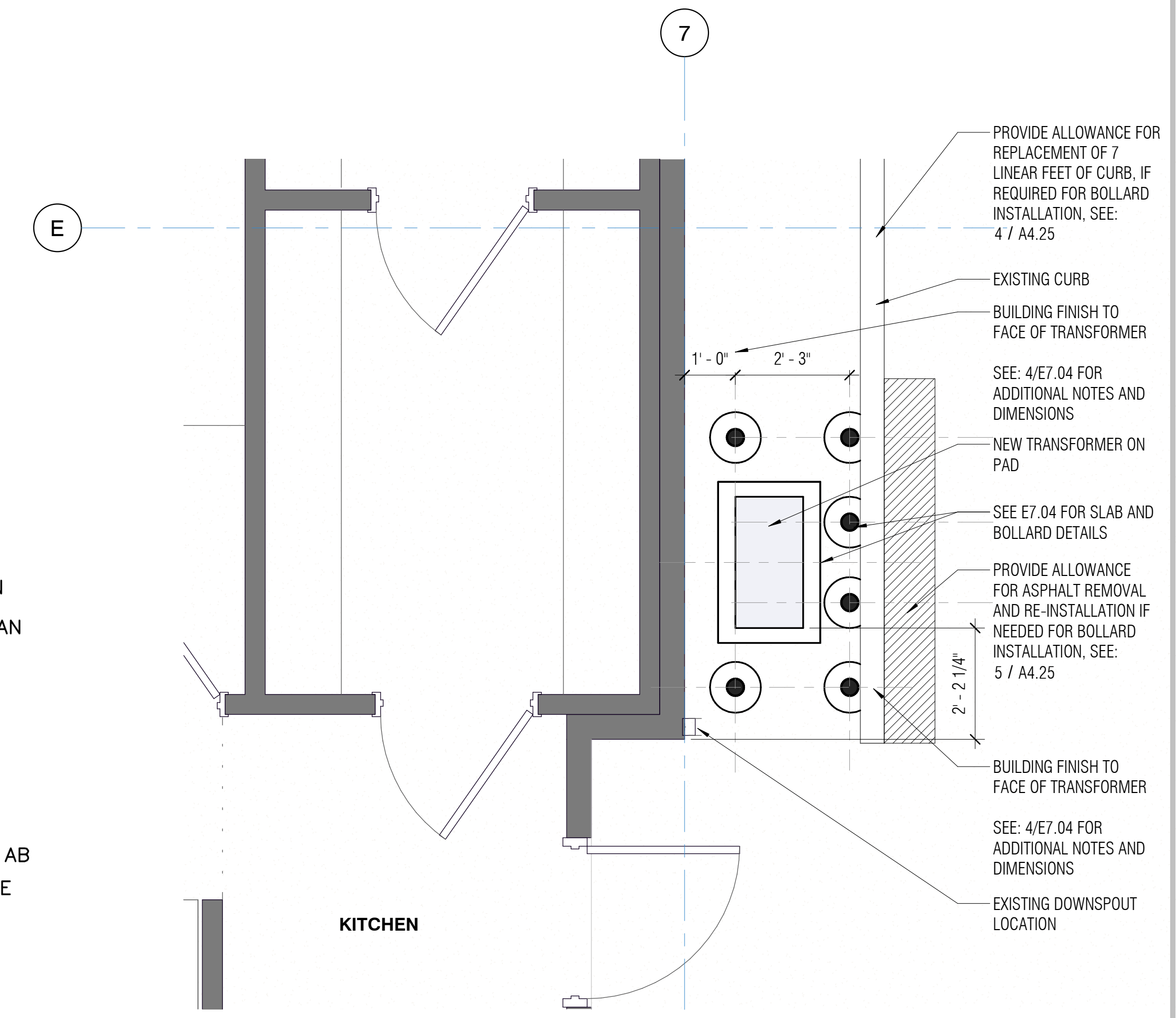


ASPHALT CONCRETE NOTES:

- PAVEMENT FILL AND SUBGRADE TO BE MINIMUM 90% RELATIVE COMPACTION WITH MOISTURE CONTENT NOT LESS THAN 2% ABOVE OPTIMUM MOISTURE CONTENT, PER GEOTECHNICAL RECOMMENDATIONS.
- AGGREGATE BASE COMPACTION TO BE MINIMUM 95% RELATIVE COMPACTION WITH MOISTURE CONTENT AT OR SLIGHTLY ABOVE THE OPTIMUM MOISTUR CONTENT PRIOR TO COMPACTION, PER GEOTECHNICAL RECOMMENDATIONS.

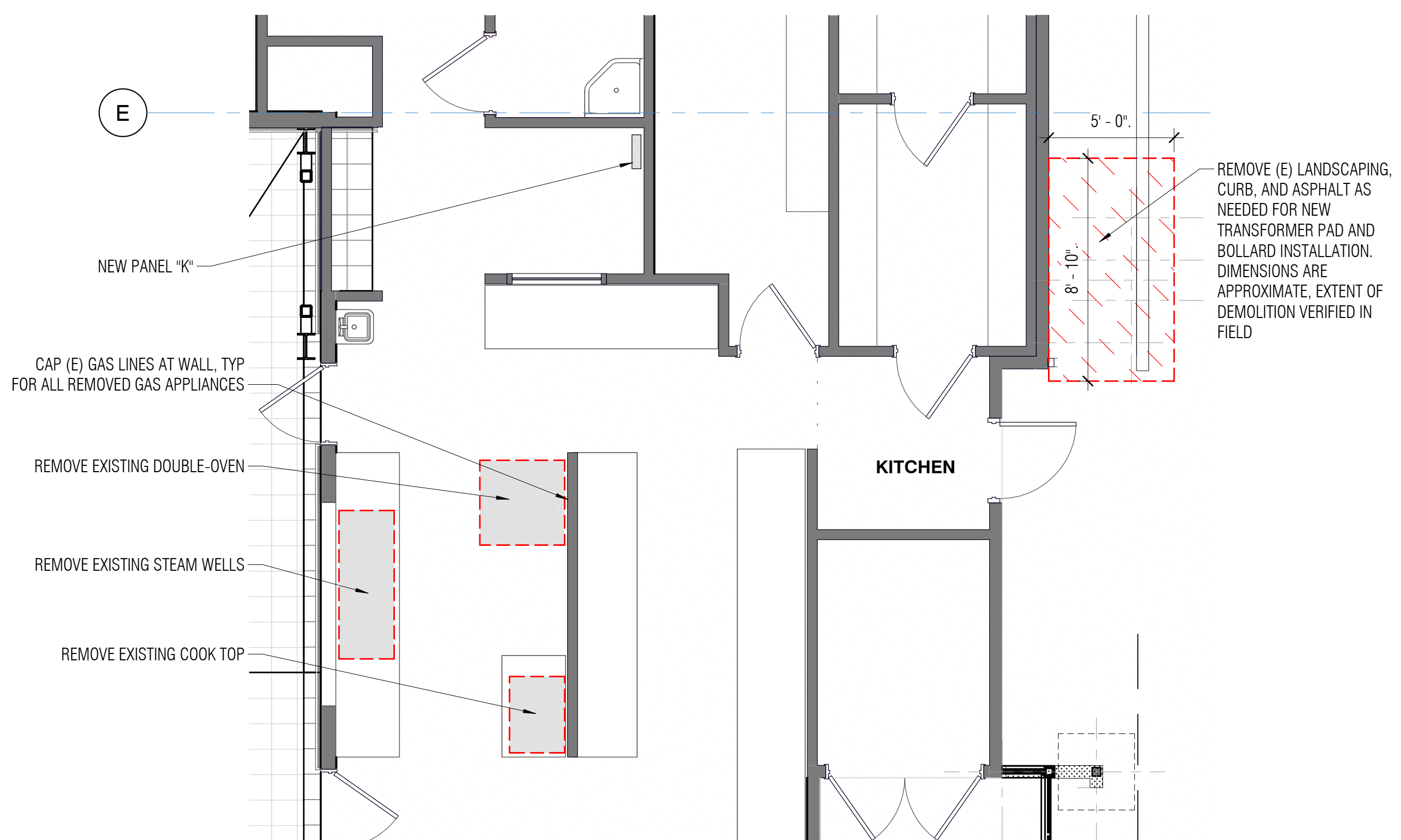


4 VERTICAL CURB
A4.25 3" = 1'-0"

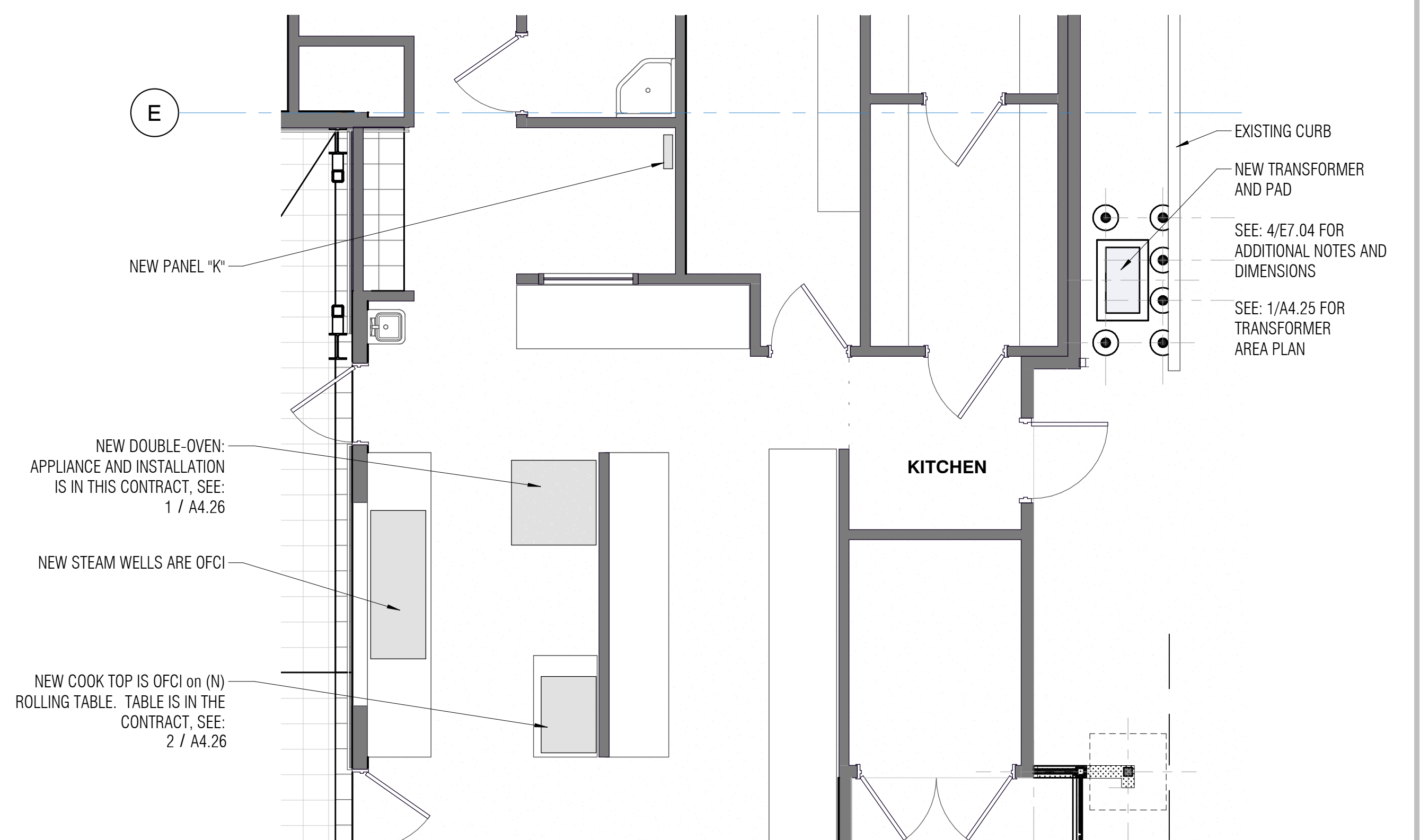


1 TRANSFORMER PAD PLAN
A4.25 1/2" = 1'-0"

5 ASPHALT CONCRETE PAVEMENT
A4.25 3" = 1'-0"



3 PARTIAL FLOOR PLAN - DEMO
A4.25 1/4" = 1'-0"



2 PARTIAL FLOOR PLAN
A4.25 1/4" = 1'-0"

O V E N S



**VC44E SERIES
DOUBLE DECK ELECTRIC CONVECTION OVENS**



Model VC44ED
Shown with optional casters



SPECIFICATIONS

Double section, electric convection oven, Vulcan Model No. (VC44ED) (VC44EC). Stainless steel front, sides, top and legs. Independently operated stainless steel doors with double pane windows. Non-sag insulation applied to the top, rear, sides, bottom and doors. Porcelain enamel on steel oven interiors measure 29" w x 22 1/4" d x 20" h. Two interior oven lights per section. Five nickel plated oven racks per section measure 28 1/4" x 20 1/2". Eleven position nickel plated rack guides with positive rack stops per section. Each section heated by electric solid sheath elements rated at 12 KW. Furnished with a two speed 1/2 H.P. oven blower-motor per section. Oven cool switch for rapid cool down. 208 or 240 volt, 60 Hz, 1 or 3 phase.

Exterior Dimensions:
40 1/2" w x 41 1/4" d (includes motor & door handles) 37 1/4" d (includes motor only) x 70" h on 8" legs.
NSF listed. UL listed. UL listed to Canadian safety standards.

- VC44ED** Solid state temperature controls adjust from 150° to 500°F. 60 minute timer with audible alarm.
- VC44EC** Computer controls with digital time and temperature readouts. 99-hour timer with audible alarm. Roast and Hold cycle. One hundred programmable menu selections. Shelf I.D. programming.

STANDARD FEATURES

- Stainless steel front, sides, top and legs.
- Independently operated stainless steel doors with double pane windows.
- 25 total KW.
- 1/2 H.P. two speed oven blower-motor.
- Moisture vent.
- Oven cool switch for rapid cool down.
- Porcelain enamel on steel oven interiors.
- Five nickel plated oven racks with eleven rack positions per section.
- One year limited parts and labor warranty.

OPTIONS

- Complete prison package.
- Security screws only.
- Casters.
- Simultaneous chain driven doors.
- 480V/60 Hz/1 or 3 phase.
- Second year extended limited parts and labor warranty.

ACCESSORIES

- Stainless steel rear motor enclosure.
- Extra oven racks(s).
- Rack hanger(s).
- Stainless steel drip pan.
- Down draft flue diverter for direct vent connection.



P.O. Box 696 ■ Louisville, KY 40201 ■ Toll-free: 1-800-814-2028 ■ Local: 502-778-2791 ■ Quote & Order Fax: 1-800-444-0602

F32536 (07/19)

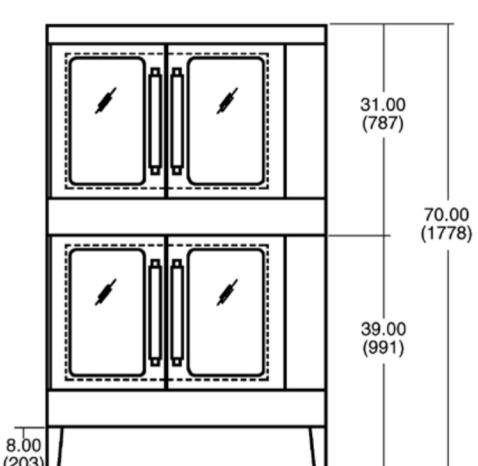
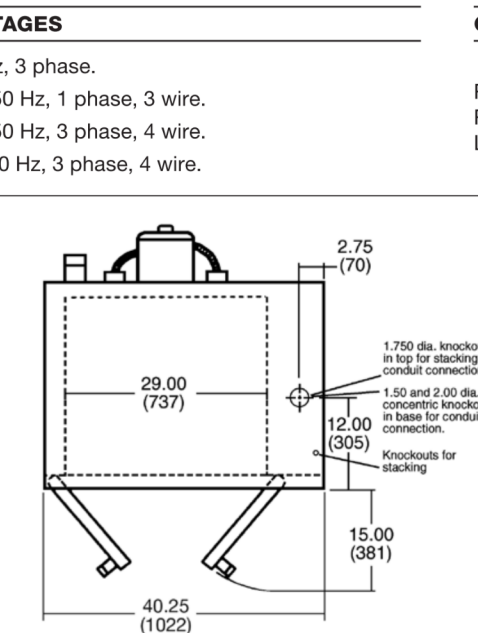
1 - DOUBLE-OVEN SPECIFICATION

A4.26 3" = 1'-0"

O V E N S



**VC44E SERIES
DOUBLE DECK ELECTRIC CONVECTION OVENS**



	CLEARANCES	
	Combustible	Non-Combustible
Rear	2"	2"
Right Side	4"	4"
Left Side	1"	1"

OPTIONAL VOLTAGES

- 480 volt, 60 Hz, 3 phase.
- 220/380 volt, 50 Hz, 1 phase, 3 wire.
- 220/380 volt, 50 Hz, 3 phase, 4 wire.
- 240/415 volt, 50 Hz, 3 phase, 4 wire.

MODEL NO.	TOTAL CONN. KW	NOMINAL AMPS PER LINE WIRE												WEIGHT					
		3 PHASE						1 PHASE						WITH SKIDS & PACKAGING		WITHOUT SKIDS & PACKAGING			
		208 VOLT		240 VOLT		480 VOLT		208V		240V		LBS.	KG	LBS.	KG				
VC44E	25	8	8	9	70	66	70	66	58	66	28	30	30	120	104	880	400	778	352



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F32536 (07/19)

NOTE: In line with its policy to continually improve its products, Vulcan reserves the right to change materials and specifications without notice. Printed on Recycled Paper

Outperform every day.
HEAVY-DUTY EQUIPMENT STANDS

Project:
Item Number:
Quantity:

Item No.	Description
4087924	24" (61 cm) wide
4087936	36" (91.4 cm) wide
4087948	48" (121.9 cm) wide

FEATURES

- Stainless steel top and undershell
- S" (12.7 cm) casters for mobility
- Includes a tethering-restraint kit to tether the table to the wall
- Tops and undershell feature a marine edge
- Ships knocked down

WARRANTY
All models shown come with Vollrath's standard warranty against defects in materials and workmanship. For full warranty details, please refer to www.Vollrath.com.

DESCRIPTION
Vollrath's Heavy-Duty Equipment Stands are designed to support the weight of heavy-duty appliances.

Note: Made to Order item. These items require additional time for fulfillment. Made to Order items cannot be changed, cancelled, or returned and may be subject to a minimum order quantity. Contact your Vollrath sales representative for details.

Agency Listings

Due to continued product improvement, please consult www.vollrath.com for current product specifications.

Outperform every day.
www.vollrath.com

The Vollrath Company, L.L.C.
1236 North 18th Street,
Sheboygan, WI 53081-3201 U.S.A.
Main Tel: 800.624.2051 or 920.457.4851
Main Fax: 920.752.5620 or 920.458.6973
Customer Service: 800.628.0830
Canada Customer Service: 800.695.8560

Technical Services
techservices@vollrathco.com
Induction Products: 800.825.6036
Countertop Warming Products: 800.354.1970
All Other Products: 800.628.0832

Heavy-Duty Equipment Stands

The Vollrath Company, L.L.C.

HEAVY-DUTY EQUIPMENT STANDS

DIMENSIONS (Shown in inches (cm))

Front View

Side View

SPECIFICATIONS

Item No.	Capacity LB (kg)	Overall Dimensions		
		(A) Width	(B) Depth	(C) Height
4087924	500 (226.8)	24 (61)		
4087936	550 (249.5)	36 (91.4)	30 (76.2)	24 (61)
4087948	600 (272.2)	48 (121.9)		

Outperform every day.
www.vollrath.com

The Vollrath Company, L.L.C.
1236 North 18th Street,
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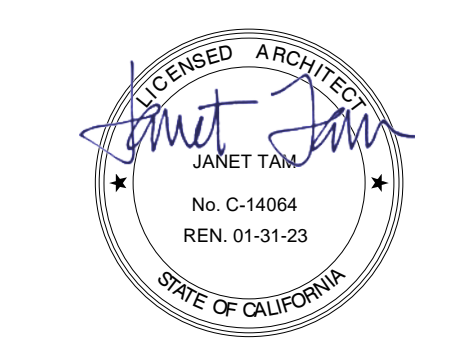
2 - RANGE TABLE SPECIFICATION

A4.26 3" = 1'-0"

NOLL & TAM ARCHITECTS

729 Heinz Avenue
Berkeley, CA 94710
tel 510.542.2200
fax 510.542.2201

ARCHITECTS SEAL



CITY OF BERKELEY N BERKELEY SENIOR CENTER ELECTRICAL AND MECHANICAL UPGRADES

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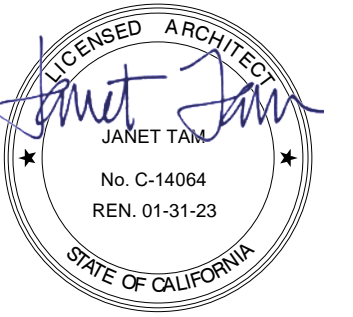
ISSUE DATE	03/15/2024
N&T JOB #	21740
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	DATE DESCRIPTION

SHEET TITLE
KITCHEN APPLIANCES

SHEET NUMBER

A4.26

SEAL



CITY OF BERKELEY N BERKELEY SENIOR CENTER ELECTRICAL AND MECHANICAL UPGRADES

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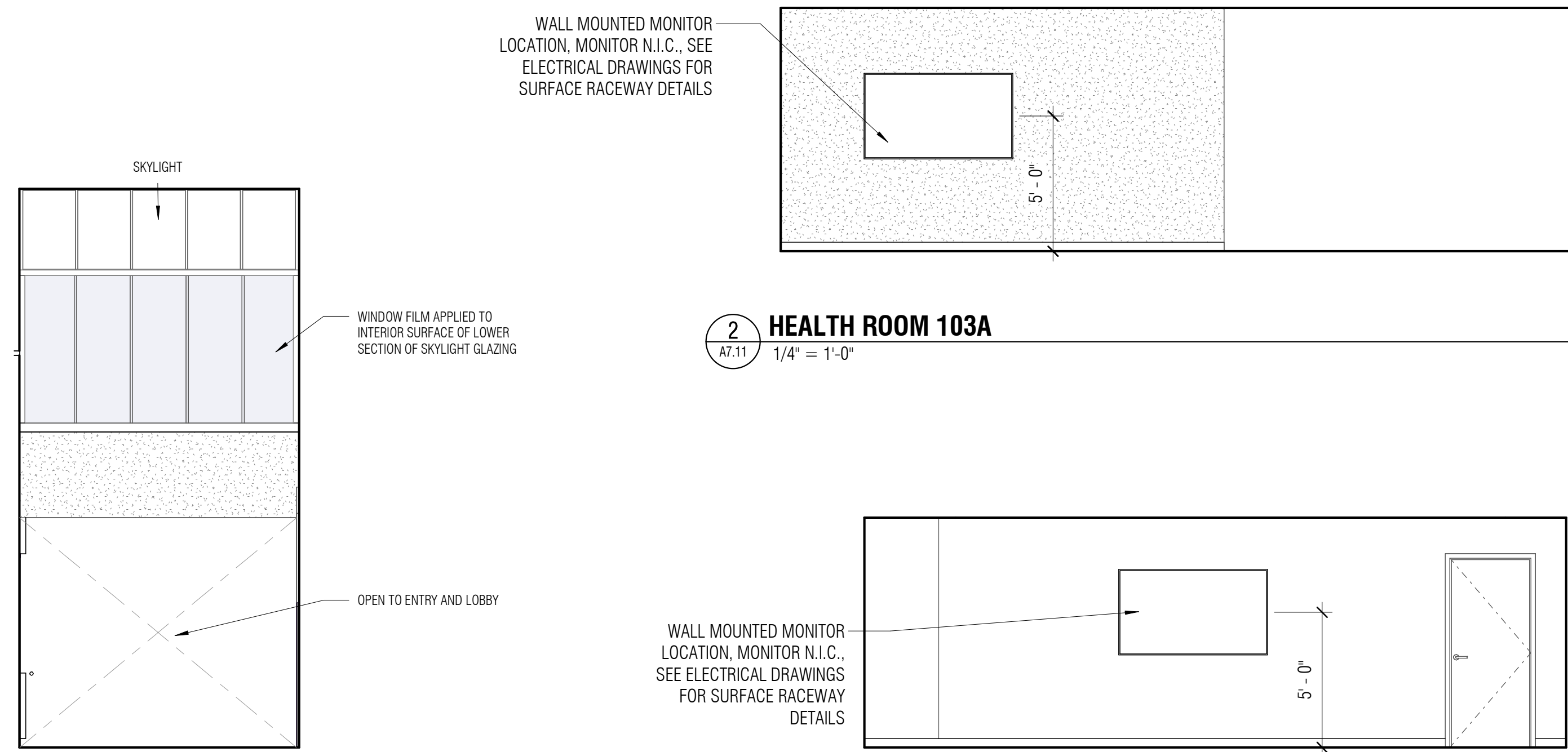
BID SET

ISSUE DATE	03/15/2024
N&T JOB #	21740
REVISIONS	
DATE	DESCRIPTION

SHEET TITLE
INTERIOR ELEVATIONS

SHEET NUMBER

A7.11



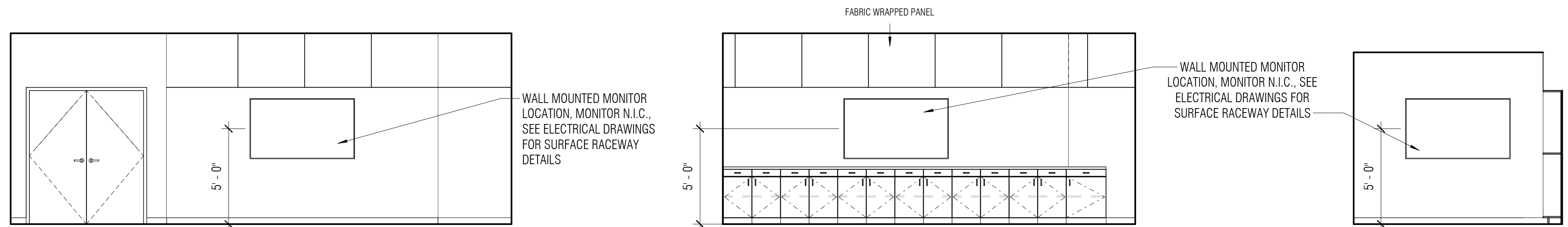
2 HEALTH ROOM 103A
A7.11 1/4" = 1'-0"

1 GAME ROOM B 101
A7.11 1/4" = 1'-0"

10 INTERIOR SKYLIGHT ELEVATION
A7.11 1/4" = 1'-0"

4 LOUNGE 144
A7.11 1/4" = 1'-0"

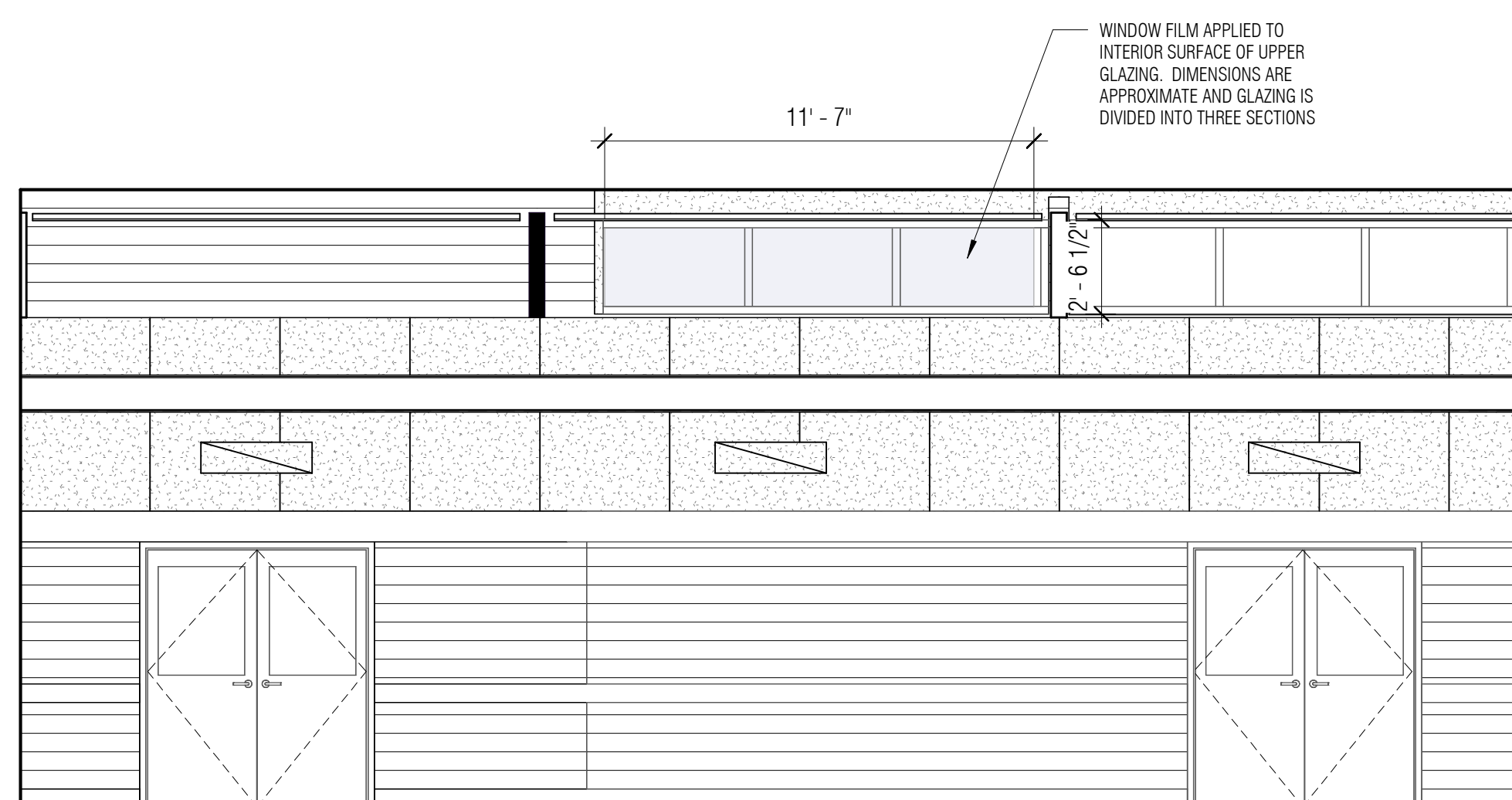
3 WORKSHOP 111
A7.11 1/4" = 1'-0"



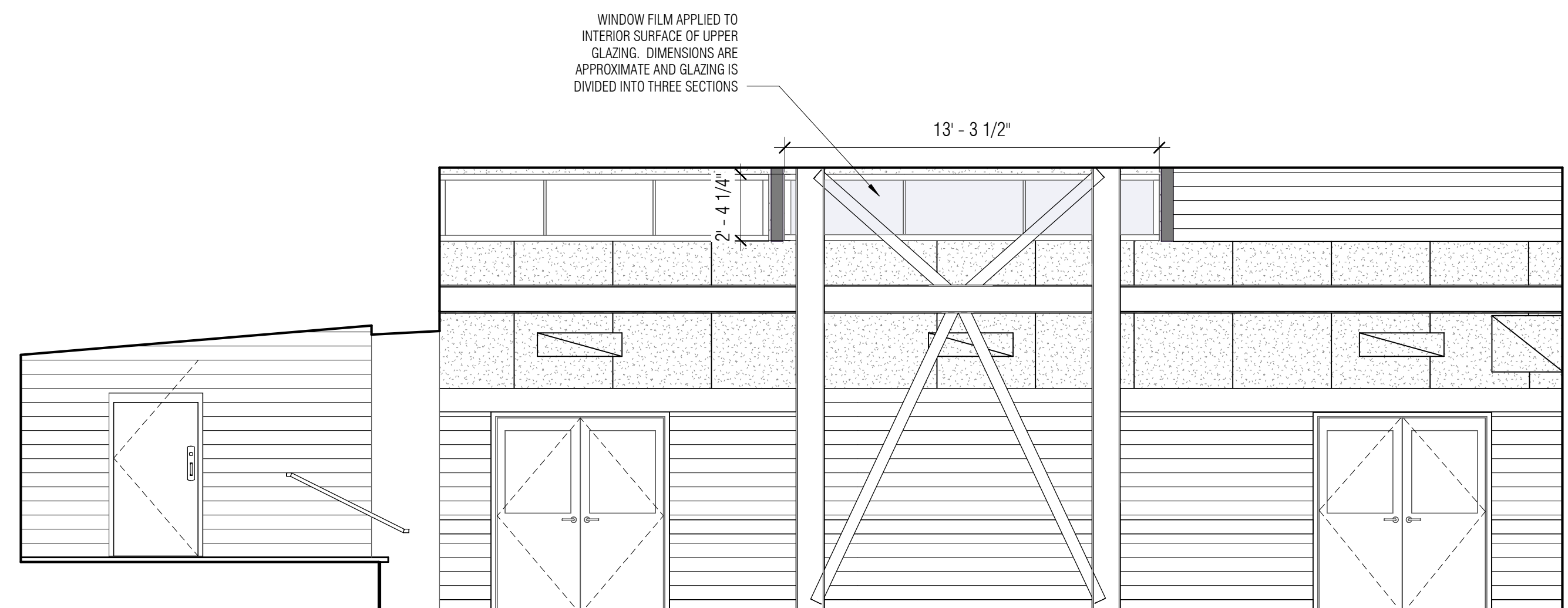
7 CLASSROOM B 211
A7.11 1/4" = 1'-0"

6 CLASSROOM C 210
A7.11 1/4" = 1'-0"

5 LIBRARY 202
A7.11 1/4" = 1'-0"



8 DINING ROOM 132
A7.11 1/4" = 1'-0"



9 MULTI PURPOSE ROOM 136
A7.11 1/4" = 1'-0"

ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR
A.F.G.	ABOVE FINISHED GRADE
C	CONDUIT
CATV	CABLE TV
C.O.	CONDUIT ONLY
CU	COPPER
E.C.	ELECTRICAL CONTRACTOR
E	EMERGENCY LIGHT FIXTURE ON EMERGENCY INVERTER, SWITCHABLE, U.O.N.
EM	EMERGENCY LIGHT FIXTURE WITH BATTERY PACK, SWITCHABLE
EMS	ENERGY MANAGEMENT SYSTEM
(E)	EXISTING
EQPT	EQUIPMENT
(ER)	EXISTING EQUIPMENT TO BE RELOCATED
(EX)	EXISTING EQUIPMENT TO BE DISCONNECTED AND REMOVED
EXT	EXTERIOR
FMC	FLEXIBLE METALLIC CONDUIT
GFI	GROUND FAULT CIRCUIT INTERRUPTING TYPE RECEPTACLE
IDF	INTERMEDIATE DISTRIBUTION FRAME
L	LOCKABLE
LV	LOW VOLTAGE
MCB	MAIN CIRCUIT BREAKER
MDF	MAIN DISTRIBUTION FRAME
MFR	MANUFACTURER
MLO	MAIN LUGS ONLY
MTD	MOUNTED
(N)	NEW
N.E.C.	NATIONAL ELECTRICAL CODE
NEU	NEUTRAL
N.I.E.C.	NOT IN ELECTRICAL CONTRACT
O.A.H.	OVERALL HEIGHT
O.F.C.I.	OWNER FURNISHED, CONTRACTOR INSTALLED
P	INDICATES FIXTURES ON PHOTOCELL CONTROL
PA	PUBLIC ADDRESS
PNL	PANEL
S.A.D.	SEE ARCHITECTURAL DRAWINGS
STC	SIGNAL TERMINAL CABINET
TC	INDICATES FIXTURES ON TIMECLOCK CONTROL
TELE	TELEPHONE
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
U.O.N.	UNLESS OTHERWISE NOTED
VAV	VAV BOX, SEE MECHANICAL DIVISION DRAWINGS FOR LOCATIONS. PROVIDE TOGGLE TYPE DISCONNECT SWITCH
WP	WEATHER PROOF, NEMA 3R
WPIU	WEATHER PROOF WHILE IN USE

SYMBOLS LIST

	TELEPHONE OUTLET, UP 18" U.O.N.
	TELEPHONE OUTLET, UP 48" U.O.N.
	COMBINED TELEPHONE/DATA OUTLET, UP 18" U.O.N. NUMBER INDICATES QUANTITY OF DATA OUTLET JACKS
	COMBINED VOICE/DATA OUTLET, MOUNTED ABOVE COUNTER U.O.N.
	WALL MOUNTED VIDEO OUTLET, UP 18" U.O.N.
	WEATHERPROOF ENCLOSURE
	CONDUIT AND WIRE CONCEALED IN CEILING OR WALL
	CONDUIT AND WIRE CONCEALED IN OR UNDER SLAB OR UNDERGROUND
	CONDUIT AND WIRE RUN EXPOSED
	CROSSMARKS INDICATE QUANTITY OF #12 CONDUCTORS PLUS PARITY SIZED GROUND CONDUCTOR (INCLUDED BUT NOT INDICATED), NO HASHMARKS INDICATES (2) #12 CONDUCTORS PLUS PARITY SIZED GROUND CONDUCTOR, U.O.N.
	GROUND WIRE
	WIRE SIZE 10 AWG FOR ALL CONDUCTORS, INCLUDING GROUND WIRE, THROUGHOUT THE COMPLETE CIRCUIT
	FLEXIBLE METALLIC CONDUIT
	HOMERUN TO PANELBOARD OR TERMINAL BOARD, AS NOTED ON PLANS
	COMPLETE CONNECTION OF EQUIPMENT
	CONDUIT STUBBED OUT, CAPPED AND MARKED
	CONDUIT TURNED UP
	CONDUIT TURNED DOWN
	TELEPHONE SYSTEM CONDUIT AND PULLWIRE; 3/4" U.O.N.
	COMPUTER/DATA SYSTEM CONDUIT AND PULLWIRE; 3/4" U.O.N.
	TELEPHONE/DATA SYSTEM CONDUIT AND PULLWIRE; 3/4" U.O.N.
	#4/0 COPPER GROUNDING ELECTRODE CONDUCTOR, U.O.N.
	DETAIL DESIGNATION - SEE DETAIL 3, SHEET E-6
	NUMBERED SHEET NOTE
	UTILITY METER
	CURRENT TRANSFORMERS
	CIRCUIT BREAKER. NUMBER INDICATES 30A 3-POLE
	FEEDER SIZE - SEE POWER SINGLE LINE DIAGRAMS & FEEDER SCHEDULE

SYMBOLS LIST

	MAIN SWITCHBOARD, DISTRIBUTION PANEL OR MOTOR CONTROL CENTER
	FLUSH MOUNTED PANELBOARD, 6'-6" TO TOP
	SURFACE MOUNTED PANELBOARD, 6'-6" TO TOP
	FUSED EQUIPMENT DISCONNECT SWITCH WITH FUSE SIZE AS RECOMMENDED BY EQUIPMENT MANUFACTURER
	COMBINATION MOTOR STARTER & DISCONNECT
	MOTOR WITH FLEXIBLE CONDUIT CONNECTION AND DISCONNECT
	TRANSFORMER
	CONCRETE PULLBOX, SIZE AS REQUIRED OR SHOWN - CHRISTY OR EQUAL WITH LABELED LID PER USE
	COPPER GROUND ROD
	FLUSH CEILING MOUNTED JUNCTION BOX, U.O.N.
	FLUSH WALL MOUNTED JUNCTION BOX, UP 18" U.O.N.
	JUNCTION BOX FLUSH FLOOR MOUNTED
	20A 3PG 125V DUPLEX RECEPTACLE, UP 18" U.O.N.
	20A 3PG 125V DUPLEX RECEPTACLE, WEATHERPROOF, UP 18" U.O.N.
	20A 3PG 125V DUPLEX RECEPTACLE, GROUND FAULT CIRCUIT INTERRUPTER TYPE, UP 18" U.O.N.
	20A 3PG 125V DUPLEX RECEPTACLE, ISOLATED GROUND TYPE, UP 18" U.O.N.
	20A 3PG 125V DUPLEX RECEPTACLE, MOUNTED ABOVE COUNTER, U.O.N.
	20A 3PG 125V DOUBLE DUPLEX RECEPTACLE, UP 18" U.O.N.
	20A 3PG 125V DOUBLE DUPLEX RECEPTACLE, MOUNTED ABOVE COUNTER, U.O.N.
	20A 3PG 125V SINGLE RECEPTACLE, UP 18" U.O.N.
	20A 3PG 125V SINGLE TWISTLOCK RECEPTACLE, NEMA L5-20R, UP 18" U.O.N.
	SPECIAL RECEPTACLE AS INDICATED ON PLANS
	CONTROLLED AND IDENTIFIED (SPLIT-WIRED) DUPLEX RECEPTACLE, WITH ONE HALF OF RECEPTACLE WIRED THROUGH LOCAL PLUG-LOAD CONTROLLER, UP 18" U.O.N.
	CONTROLLED DUPLEX RECEPTACLE WIRED THROUGH LOCAL PLUG-LOAD CONTROLLER, UP 18" U.O.N.
	FLUSH IN FLOOR OUTLET BOX WITH QUANTITY OF 20A 3PG 125V DUPLEX RECEPTACLES AS INDICATED ON PLANS
	SURFACE MOUNTED WIREMOLD RACEWAY WITH RECEPTACLES AS INDICATED ON PLANS

GENERAL NOTE: ALL (10) WAP INSTALLATIONS AND ASSOCIATED INFRASTRUCTURE IS REMOVED FROM THIS PROJECT'S SCOPE

LIST OF DRAWINGS

E0.01	SYMBOLS LIST & LIST OF DRAWINGS
E0.02	GENERAL NOTES & GENERAL DEMOLITION NOTES
E3.31	FIRST FLOOR PLAN - ELECTRICAL
E3.32	SECOND FLOOR PLAN - ELECTRICAL
E4.01	KITCHEN ELECTRICAL
E6.01	SCHEDULES
E7.01	DETAILS
E7.02	DETAILS

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CITY OF BERKELEY NORTH BERKELEY SENIOR CENTER SEISMIC UPGRADES and RENOVATIONS

1901 HEARST AVE.
BERKELEY CA 94709

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ISSUE DATE	03/15/2024
N&T JOB #	X
REVISIONS	
	DATE DESCRIPTION

SHEET TITLE
SYMBOLS LIST & LIST OF DRAWINGS

SHEET NUMBER

E0.01

GENERAL DEMOLITION NOTES

1. THE CONTRACTOR SHALL VERIFY IN THE FIELD ALL LINES, LEVELS, DIMENSIONS AND EXISTING CONDITIONS. THE INFORMATION ON THE DRAWINGS REGARDING EXISTING ELECTRICAL EQUIPMENT AND BRANCH CIRCUITS IS THE RESULT OF FIELD SURVEY AND IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. IT IS INTENDED, HOWEVER, AS A GUIDE FOR USE IN VERIFICATION ONLY.
2. ANY EXISTING ELECTRICAL EQUIPMENT IN THE AREA OF NEW CONSTRUCTION NOT SHOWN ON THE EXISTING PLANS SHALL BE DOCUMENTED AND SUBMITTED TO THE ENGINEER FOR DETERMINATION OF ACTION REQUIRED.
3. WHEREVER THE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT IS CALLED FOR AND ALL EQUIPMENT ON A PARTICULAR BRANCH CIRCUIT IS TO BE REMOVED, ALL CONDUIT AND WIRE BACK TO THE PANEL SHALL BE ENTIRELY REMOVED AND THE CIRCUIT IN PANEL SHALL BE MARKED "SPARE". THIS APPLIES TO SIGNAL AND COMMUNICATIONS SYSTEMS EQUIPMENT, CONDUIT, AND WIRE AS WELL.
4. WHEREVER THE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT IS CALLED FOR AND ALL EQUIPMENT ON A PARTICULAR BRANCH CIRCUIT IS NOT TO BE REMOVED, THE CIRCUIT SHALL BE MAINTAINED CONTINUOUS TO THE EXISTING EQUIPMENT IN USE WITH MINIMUM INTERRUPTIONS OF POWER. THIS APPLIES TO SIGNAL AND COMMUNICATIONS SYSTEMS EQUIPMENT, CONDUIT, AND WIRE AS WELL.
5. WHENEVER THE REMOVAL OF EXISTING CONSTRUCTION REVEALS ELECTRICAL WORK THAT IS TO REMAIN, BUT IS IN CONFLICT WITH NEW CONSTRUCTION, RELOCATE THE EXISTING ELECTRICAL WORK AS NECESSARY TO AVOID ANY CONFLICT. RELOCATION WORK SHALL BE DONE TO MINIMIZE ANY INTERRUPTIONS OF POWER.
6. CARE SHALL BE TAKEN IN ORDER TO IDENTIFY AND PROTECT ALL EXISTING ELECTRICAL WORK THAT IS TO REMAIN.
7. ENSURE RECONNECTION OF EXISTING DEVICES WHOSE CIRCUITS HAVE BEEN INTERRUPTED BY DEMOLITION BY PROVIDING NEW CONNECTION TO ANOTHER EXISTING TO REMAIN DEVICE OR PANEL.
8. ALL EXISTING ELECTRICAL EQUIPMENT SHOWN ON THE PLANS FOR NEW WORK ARE THOSE WHICH ARE TO BE REUSED DURING SOME PHASE OF THE NEW CONSTRUCTION OR REQUIRE SOME SPECIAL CONSIDERATIONS.
9. WHENEVER THE REMOVAL OF EXISTING ELECTRICAL PANELBOARDS ARE CALLED FOR AND ALL EXISTING BRANCH CIRCUITS ARE NOT TO BE REMOVED, THE EXISTING BRANCH CIRCUITS SHALL BE CONNECTED TO OTHER EXISTING ELECTRICAL EQUIPMENT OR PANELS STILL IN USE WITH MINIMUM INTERRUPTIONS OF POWER. ALSO, IF REQUIRED, THESE SAME BRANCH CIRCUITS SHALL BE RECONNECTED TO RELOCATED EXISTING OR NEW PANELBOARDS AS PART OF THE NEW CONSTRUCTION. THIS APPLIES TO SIGNAL AND COMMUNICATIONS SYSTEMS EQUIPMENT, CONDUIT AND WIRE AS WELL.
10. THE ELECTRICAL CONTRACTOR SHALL REVISE EXISTING PANEL SCHEDULES TO CORRESPOND TO ACTUAL CONDITIONS AFTER ALL DEMOLITION AND NEW WORK IS COMPLETED.
11. REMOVE ALL ABANDONED CONDUIT AND WIRE ABOVE CEILINGS.
12. WHEN ELECTRICAL EQUIPMENT OR DEVICE IS REMOVED FROM AN EXISTING WALL OR CEILING WHICH IS TO REMAIN, PATCH ABANDONED OPENINGS TO MATCH EXISTING FINISH.
13. EXISTING CONDUIT FEEDS UP THROUGH FLOOR SHALL BE CUT OFF AND PLUGGED FLUSH WITH FLOOR WHERE EXISTING WALLS, ETC., ARE REMOVED. REMOVE CONDUCTORS FROM THE POINT BACK TO LAST OUTLET REMAINING IN SERVICE.
14. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO MAINTAIN CONTINUITY OF ALL ELECTRICAL SYSTEMS, EQUIPMENT, ETC. REMAINING IN OPERATION WHICH IS BEING FED BY AN ABANDONED OUTLET. MAINTAINING CONTINUITY SHALL CONSIST OF REROUTING OF CONDUIT, WIRE, ETC. AS REQUIRED.
15. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF EXISTING CIRCUITS AND ADJUST CIRCUIT NUMBERS ACCORDING TO EXISTING CONDITIONS IF REQUIRED
16. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO REMOVAL OF EXISTING ELECTRICAL EQUIPMENT AND TURN OVER REMOVED EQUIPMENT THAT THE OWNER REQUESTS, IN AS-FOUND CONDITION. EQUIPMENT THAT IS TO BE TURNED OVER SHALL BE BOXED AND TAGGED TO IDENTIFY THE SPECIFIC EQUIPMENT. EQUIPMENT TO BE TEMPORARILY REMOVED DUE TO THE CONSTRUCTION SHALL BE CLEANED AND RE-INSTALLED IN ITS ORIGINAL CONDITION OR AS REQUIRED.
17. IF ANY EQUIPMENT THAT IS SCHEDULED TO REMAIN IN OPERATION IS DAMAGED BY THE CONTRACTOR, IT SHALL BE REPLACED TO ITS ORIGINAL CONDITION SATISFACTORY TO THE OWNER AT CONTRACTOR'S EXPENSE.

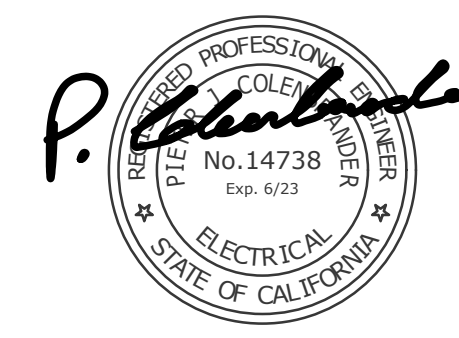
GENERAL NOTES

1. PRIOR TO BID THE CONTRACTOR SHALL VISIT THE SITE TO ADEQUATELY DETERMINE ALL PRE-EXISTING CONDITIONS. BY THE ACT OF SUBMITTING A BID, THE CONTRACTOR WILL BE DEEMED TO HAVE COMPLIED WITH THE FOREGOING, TO HAVE ACCEPTED SUCH CONDITIONS, AND TO HAVE MADE ALLOWANCES THEREFORE IN PREPARING THE BID.
2. PROVIDE PARITY SIZED GREEN GROUND WIRE IN ALL POWER CONDUITS, BRANCH CIRCUITS (LIGHTING & POWER) AND HOMERUNS. PROVIDE ADDITIONAL ISOLATED GROUND, GREEN WITH YELLOW STRIPE, TO ALL ISOLATED GROUND RECEPTACLES.
3. PROVIDE PULLROPE IN ALL EMPTY CONDUITS THROUGHOUT THE PROJECT.
4. VERIFY EXACT CONNECTION REQUIREMENTS, OUTLET TYPE(S), MOUNTING HEIGHT(S) AND LOCATION(S) OF ALL OWNER-SUPPLIED EQUIPMENT, AND ALL EQUIPMENT PROVIDED UNDER OTHER SECTIONS OF THE SPECIFICATIONS, PRIOR TO ROUGH-IN. REFER TO ARCHITECTURAL DRAWINGS FOR EQUIPMENT LOCATIONS.
5. COORDINATE TRENCHING WITH OWNER AND OTHER TRADES BEFORE BEGINNING WORK.
6. ALL CONDUIT PENETRATIONS THROUGH FIRE-RATED WALLS AND FLOORS SHALL BE SEALED AND EQUIPPED WITH U.L. LISTED FIRE PENETRATION ASSEMBLIES TO MAINTAIN FIRE SEPARATION RATING.
7. DO NOT INSTALL ANY OUTLETS BACK TO BACK IN STUD WALLS OR DE-MOUNTABLE PARTITIONS.
8. CIRCUITRY AND CONDUIT ROUTING SHOWN ON THE PLANS IS DIAGRAMMATIC ONLY. THIS CONTRACTOR IS RESPONSIBLE FOR BECOMING COMPLETELY FAMILIAR WITH THE ARCHITECTURAL AND STRUCTURAL CONDITIONS AND LIMITATIONS IN THE BUILDING AND TO PROVIDE ALL LABOR, TOOLS AND MATERIALS REQUIRED TO PRODUCE A COMPLETELY CONCEALED INSTALLATION WHEREVER INDICATED ON THE PLANS.
9. MAINTAIN "AS-BUILT" RECORDS AT ALL TIMES, SHOWING EXACT LOCATION OF ALL UNDERGROUND AND/OR CONCEALED CONDUITS AND SERVICES INSTALLED UNDER THIS CONTRACT, INCLUDING CIRCUIT IDENTIFICATION WHERE APPLICABLE. PROVIDE OWNER WITH "AS-BUILT" DOCUMENTS AS INDICATED IN THE SPECIFICATIONS, AND/OR CALLED FOR IN THE SPECIFICATIONS.
10. DRAWINGS INDICATE THE LOCATION(S) OF DEVICES, LUMINAIRE(S) AND EQUIPMENT, AND THE CIRCUIT NUMBER AND PANEL DESIGNATED TO SUPPLY THEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETELY CONNECTING ALL ELECTRICAL DEVICES TO CIRCUITS INDICATED ON THE DRAWINGS.
11. UNLESS OTHERWISE NOTED, ALL WORK SHOWN ON DRAWINGS IS NEW AND TO BE PROVIDED AND INSTALLED COMPLETE UNDER THIS CONTRACT.
12. ALL EQUIPMENT GROUNDING SHALL CONFORM TO ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE, LATEST EDITION.
13. ALL EXTERIOR CONDUIT ABOVE GRADE, INCLUDING ALL ROOF MOUNTED CONDUIT, SHALL BE GALVANIZED RIGID STEEL. COAT ALL EXPOSED THREADS WITH GALVANIZING PAINT. PAINT ALL SURFACE MOUNTED RACEWAYS AND PULLBOXES TO MATCH SURROUNDING CONDITIONS, AS DIRECTED BY THE ARCHITECT.
14. ALL ELECTRICAL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITION OF THE N.E.C., AS WELL AS STATE, AND LOCAL CODES AND REQUIREMENTS.
15. ALL CONDUIT SHALL BE CONCEALED, UNLESS OTHERWISE NOTED.
16. EQUIPMENT OVERLOADS AND FUSES SHALL BE PROVIDED AND INSTALLED AS PER NAME PLATE ON THE EQUIPMENT ACTUALLY PROVIDED.
17. THE CONTRACTOR SHALL PAY FOR ALL REQUIRED PERMITS AND INSPECTION FEES.
18. THE CONTRACTOR SHALL VERIFY ALL CRITICAL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
19. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR ALL BRANCH CIRCUITS.
20. ALL CONDUIT CONNECTORS TO OUTLET OR JUNCTION BOXES SHALL HAVE INSULATED THROATS (MANUFACTURED AS AN INTEGRAL PART OF THE CONNECTOR). AFTER-MARKET INSERTABLE THROATS ARE NOT ACCEPTABLE.
21. ALL CIRCUITS IN ALL JUNCTION BOXES AND DEVICES SHALL BE CLEARLY IDENTIFIED BY MEANS OF "EZ" NUMBERING TAGS OR EQUIVALENT, TO IDENTIFY THE CIRCUIT NUMBER OR RELAY SUPPLYING THE CONDUCTOR. ALL JUNCTION BOXES SHALL BE LABELED PER SPECIFICATIONS.
22. ALL SURFACE MOUNTED POWER AND SIGNAL BOXES IN FINISHED AREAS SHALL BE "WIREMOLD" TYPE, WITH MATCHING RACEWAYS. SURFACE MOUNTED STEEL JUNCTION BOXES AND/OR EMT ARE NOT ACCEPTABLE.
23. ALL LOCATIONS OF BARE METAL SURFACE MOUNTED CONDUIT, BOXES, PANEL COVERS, AND RELATED FITTINGS OR ACCESSORIES INSTALLED IN FINISHED AREAS (BOTH INTERIOR AND EXTERIOR) SHALL BE FINISH PAINTED TO MATCH THE SURFACE TO WHICH THEY ARE MOUNTED TO (AFTER INSTALLATION). PAINTING SHALL INCLUDE DIFFERENT COLORS AS REQUIRED TO MATCH EXISTING STRIPING OR OTHER BUILDING FEATURES TO WHICH THE EQUIPMENT IS ATTACHED AND VISIBLE. VERIFY EXACT JUNCTION BOX LOCATION(S) AND ROUTING OF EXPOSED RACEWAYS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
24. PROVIDE A BLANK COVER PLATE (COLOR TO MATCH ADJACENT DEVICES OR AS SPECIFICALLY CALLED FOR IN SPECIFICATIONS) FOR ALL JUNCTION BOXES (NEW AND EXISTING) ON THE PROJECT WHEN NO DEVICE IS INSTALLED.
25. FOR OUTDOOR 15 AND 20-AMPERE, 125 AND 250-VOLT RECEPTACLES: RECEPTACLES LOCATED IN "WET" LOCATIONS SHALL HAVE "IN-USE" TYPE WEATHERPROOF COVER PLATES PROVIDED AND INSTALLED; RECEPTACLES LOCATED IN "DAMP" LOCATIONS SHALL HAVE "IN-USE" TYPE WEATHERPROOF COVER PLATES IN LOCATIONS DEEMED TO BE "IN-USE" WITH CORD AND PLUG ATTACHED.

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SHEET TITLE
GENERAL NOTES

SHEET NUMBER

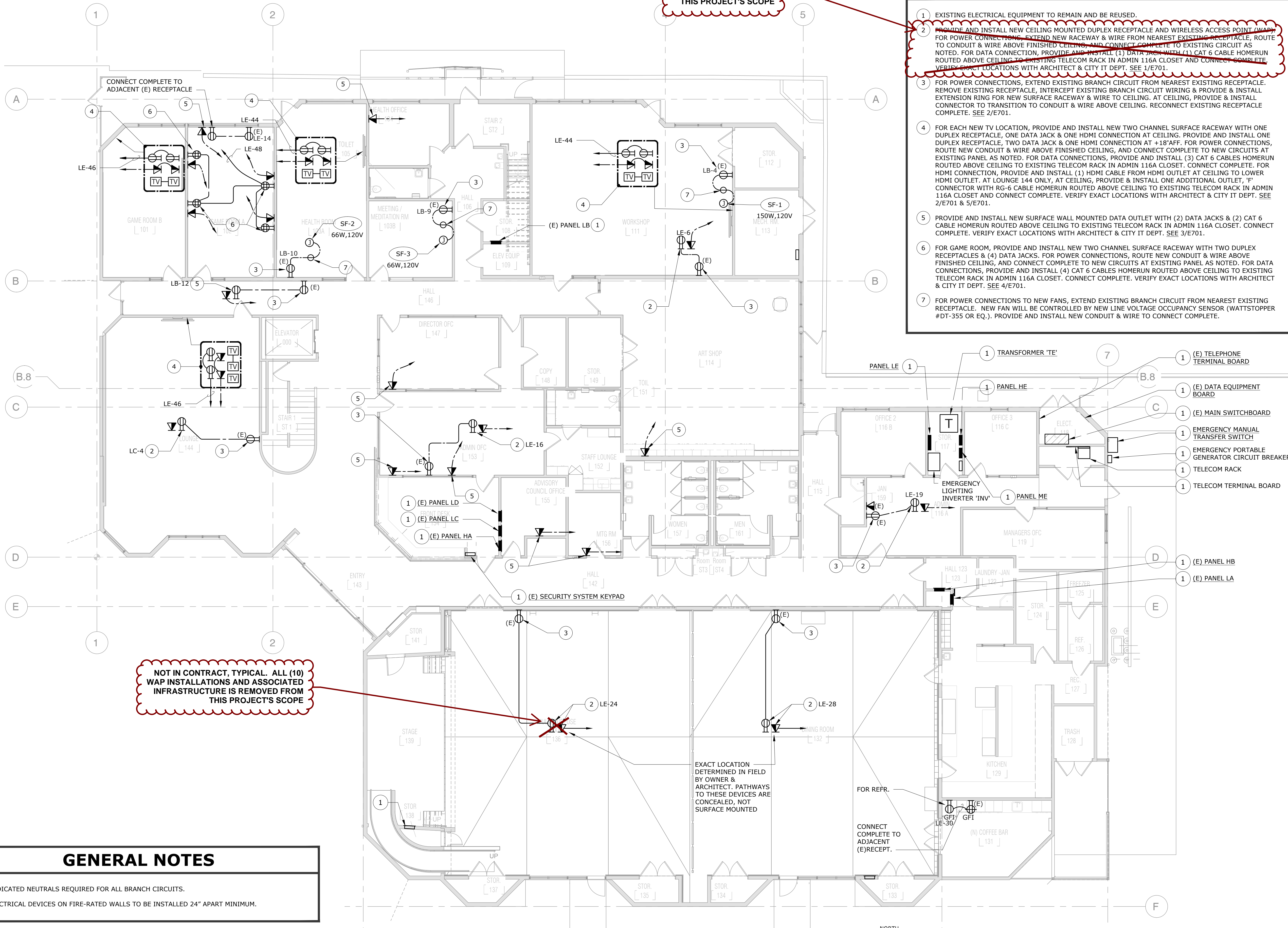
E0.02

NOT IN CONTRACT, THIS WORK HAS BEEN COMPLETED. OMIT FROM THIS PROJECT'S SCOPE

- ### NUMBERED SHEET NOTES
- EXISTING ELECTRICAL EQUIPMENT TO REMAIN AND BE REUSED.
 - PROVIDE AND INSTALL NEW CEILING MOUNTED DUPLEX RECEPTACLE AND WIRELESS ACCESS POINT (WAP) FOR POWER CONNECTION. EXTEND NEW RACEWAY & WIRE FROM NEAREST EXISTING RECEPTACLE, ROUTE TO CONDUIT & WIRE ABOVE FINISHED CEILING AND CONNECT COMPLETE TO EXISTING CIRCUIT AS NOTED. FOR DATA CONNECTION, PROVIDE AND INSTALL (1) DATA JACK WITH (1) CAT 6 CABLE HOMERUN ROUTED ABOVE CEILING TO EXISTING TELECOM RACK IN ADMIN 116A CLOSET AND CONNECT COMPLETE. VERIFY EXACT LOCATIONS WITH ARCHITECT & CITY IT DEPT. SEE 1/E701.
 - FOR POWER CONNECTIONS, EXTEND EXISTING BRANCH CIRCUIT FROM NEAREST EXISTING RECEPTACLE. REMOVE EXISTING RECEPTACLE, INTERCEPT EXISTING BRANCH CIRCUIT WIRING & PROVIDE & INSTALL EXTENSION RING FOR NEW SURFACE RACEWAY & WIRE TO CEILING. AT CEILING, PROVIDE & INSTALL CONNECTOR TO TRANSITION TO CONDUIT & WIRE ABOVE CEILING. RECONNECT EXISTING RECEPTACLE COMPLETE. SEE 2/E701.
 - FOR EACH NEW TV LOCATION, PROVIDE AND INSTALL NEW TWO CHANNEL SURFACE RACEWAY WITH ONE DUPLEX RECEPTACLE, ONE DATA JACK & ONE HDMI CONNECTION AT CEILING. PROVIDE AND INSTALL ONE DUPLEX RECEPTACLE, TWO DATA JACK & ONE HDMI CONNECTION AT +18" AFF. FOR POWER CONNECTIONS, ROUTE NEW CONDUIT & WIRE ABOVE FINISHED CEILING, AND CONNECT COMPLETE TO NEW CIRCUITS AT EXISTING PANEL AS NOTED. FOR DATA CONNECTIONS, PROVIDE AND INSTALL (3) CAT 6 CABLES HOMERUN ROUTED ABOVE CEILING TO EXISTING TELECOM RACK IN ADMIN 116A CLOSET. CONNECT COMPLETE. FOR HDMI CONNECTION, PROVIDE AND INSTALL (1) HDMI CABLE FROM HDMI OUTLET AT CEILING TO LOWER HDMI OUTLET. AT LOUNGE 144 ONLY, AT CEILING, PROVIDE & INSTALL ONE ADDITIONAL OUTLET, 'F' CONNECTOR WITH RG-6 CABLE HOMERUN ROUTED ABOVE CEILING TO EXISTING TELECOM RACK IN ADMIN 116A CLOSET AND CONNECT COMPLETE. VERIFY EXACT LOCATIONS WITH ARCHITECT & CITY IT DEPT. SEE 2/E701 & 5/E701.
 - PROVIDE AND INSTALL NEW SURFACE WALL MOUNTED DATA OUTLET WITH (2) DATA JACKS & (2) CAT 6 CABLE HOMERUN ROUTED ABOVE CEILING TO EXISTING TELECOM RACK IN ADMIN 116A CLOSET. CONNECT COMPLETE. VERIFY EXACT LOCATIONS WITH ARCHITECT & CITY IT DEPT. SEE 3/E701.
 - FOR GAME ROOM, PROVIDE AND INSTALL NEW TWO CHANNEL SURFACE RACEWAY WITH TWO DUPLEX RECEPTACLES & (4) DATA JACKS. FOR POWER CONNECTIONS, ROUTE NEW CONDUIT & WIRE ABOVE FINISHED CEILING, AND CONNECT COMPLETE TO NEW CIRCUITS AT EXISTING PANEL AS NOTED. FOR DATA CONNECTIONS, PROVIDE AND INSTALL (4) CAT 6 CABLES HOMERUN ROUTED ABOVE CEILING TO EXISTING TELECOM RACK IN ADMIN 116A CLOSET. CONNECT COMPLETE. VERIFY EXACT LOCATIONS WITH ARCHITECT & CITY IT DEPT. SEE 4/E701.
 - FOR POWER CONNECTIONS TO NEW FANS, EXTEND EXISTING BRANCH CIRCUIT FROM NEAREST EXISTING RECEPTACLE. NEW FAN WILL BE CONTROLLED BY NEW LINE VOLTAGE OCCUPANCY SENSOR (WATTSTOPPER #DT-355 OR EQ.). PROVIDE AND INSTALL NEW CONDUIT & WIRE TO CONNECT COMPLETE.

NOT IN CONTRACT, TYPICAL. ALL (10) WAP INSTALLATIONS AND ASSOCIATED INFRASTRUCTURE IS REMOVED FROM THIS PROJECT'S SCOPE

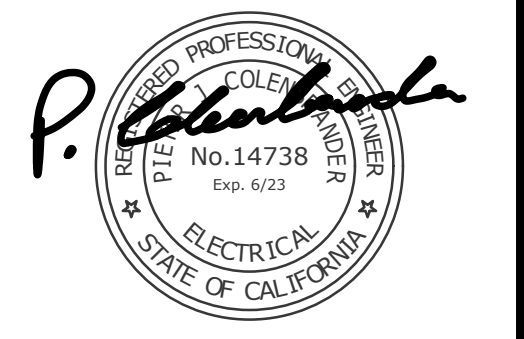
- ### GENERAL NOTES
- DEDICATED NEUTRALS REQUIRED FOR ALL BRANCH CIRCUITS.
 - ELECTRICAL DEVICES ON FIRE-RATED WALLS TO BE INSTALLED 24" APART MINIMUM.



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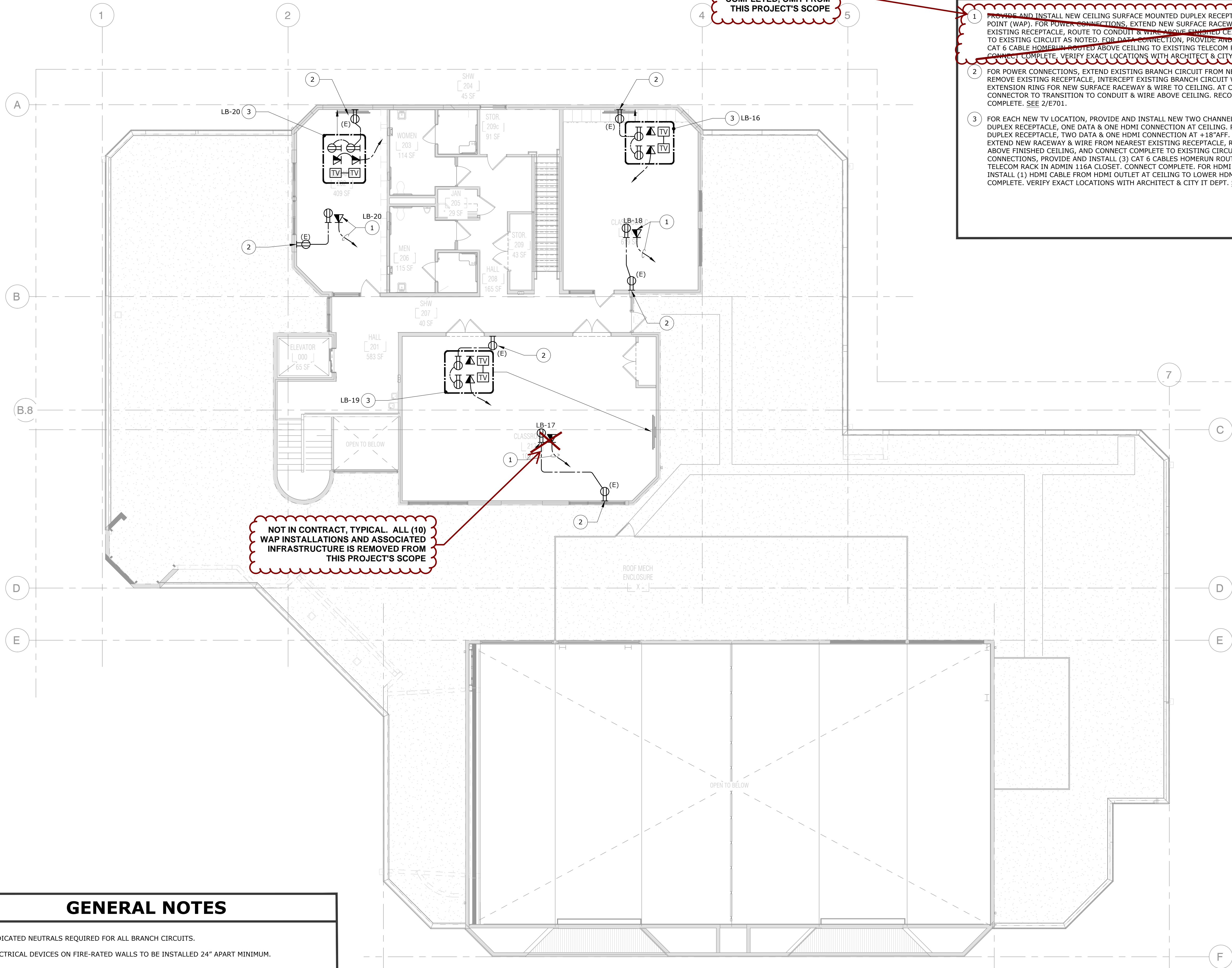
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SHEET TITLE
FIRST FLOOR PLAN - ELECTRICAL

SHEET NUMBER

E3.31

FIRST FLOOR PLAN - ELECTRICAL
SCALE: 1/8" = 1'-0"



NOT IN CONTRACT, THIS WORK HAS BEEN COMPLETED, OMIT FROM THIS PROJECT'S SCOPE

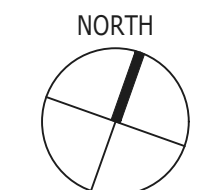
NUMBERED SHEET NOTES

- 1 ~~PROVIDE AND INSTALL NEW CEILING SURFACE MOUNTED DUPLEX RECEPTACLE AND WIRELESS ACCESS POINT (WAP). FOR POWER CONNECTIONS, EXTEND NEW SURFACE RACEWAY & WIRE FROM NEAREST EXISTING RECEPTACLE, ROUTE TO CONDUIT & WIRE ABOVE FINISHED CEILING, AND CONNECT COMPLETE TO EXISTING CIRCUIT AS NOTED. FOR DATA CONNECTION, PROVIDE AND INSTALL (1) DATA JACK WITH (1) CAT 6 CABLE HOMERUN ROUTED ABOVE CEILING TO EXISTING TELECOM RACK IN ADMIN 116A CLOSET. CONNECT COMPLETE. VERIFY EXACT LOCATIONS WITH ARCHITECT & CITY IT DEPT. SEE 1/E701.~~
- 2 FOR POWER CONNECTIONS, EXTEND EXISTING BRANCH CIRCUIT FROM NEAREST EXISTING RECEPTACLE. REMOVE EXISTING RECEPTACLE, INTERCEPT EXISTING BRANCH CIRCUIT WIRING & PROVIDE & INSTALL EXTENSION RING FOR NEW SURFACE RACEWAY & WIRE TO CEILING. AT CEILING, PROVIDE & INSTALL CONNECTOR TO TRANSITION TO CONDUIT & WIRE ABOVE CEILING. RECONNECT EXISTING RECEPTACLE COMPLETE. SEE 2/E701.
- 3 FOR EACH NEW TV LOCATION, PROVIDE AND INSTALL NEW TWO CHANNEL SURFACE RACEWAY WITH ONE DUPLEX RECEPTACLE, ONE DATA & ONE HDMI CONNECTION AT CEILING. PROVIDE AND INSTALL ONE DUPLEX RECEPTACLE, TWO DATA & ONE HDMI CONNECTION AT +18" AFF. FOR POWER CONNECTIONS, EXTEND NEW RACEWAY & WIRE FROM NEAREST EXISTING RECEPTACLE, ROUTE TO CONDUIT & WIRE ABOVE FINISHED CEILING, AND CONNECT COMPLETE TO EXISTING CIRCUIT AS NOTED. FOR DATA CONNECTIONS, PROVIDE AND INSTALL (3) CAT 6 CABLES HOMERUN ROUTED ABOVE CEILING TO EXISTING TELECOM RACK IN ADMIN 116A CLOSET. CONNECT COMPLETE. FOR HDMI CONNECTION, PROVIDE AND INSTALL (1) HDMI CABLE FROM HDMI OUTLET AT CEILING TO LOWER HDMI OUTLET AND CONNECT COMPLETE. VERIFY EXACT LOCATIONS WITH ARCHITECT & CITY IT DEPT. SEE 2/E701 & 5/E701.

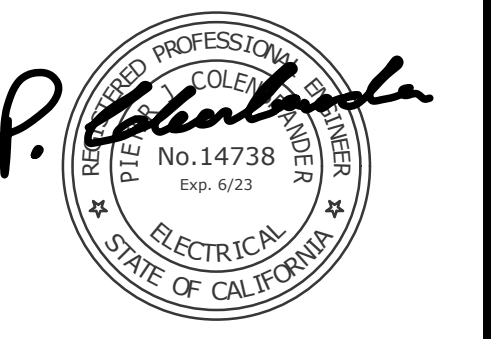
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GENERAL NOTES

- A. DEDICATED NEUTRALS REQUIRED FOR ALL BRANCH CIRCUITS.
- B. ELECTRICAL DEVICES ON FIRE-RATED WALLS TO BE INSTALLED 24" APART MINIMUM.



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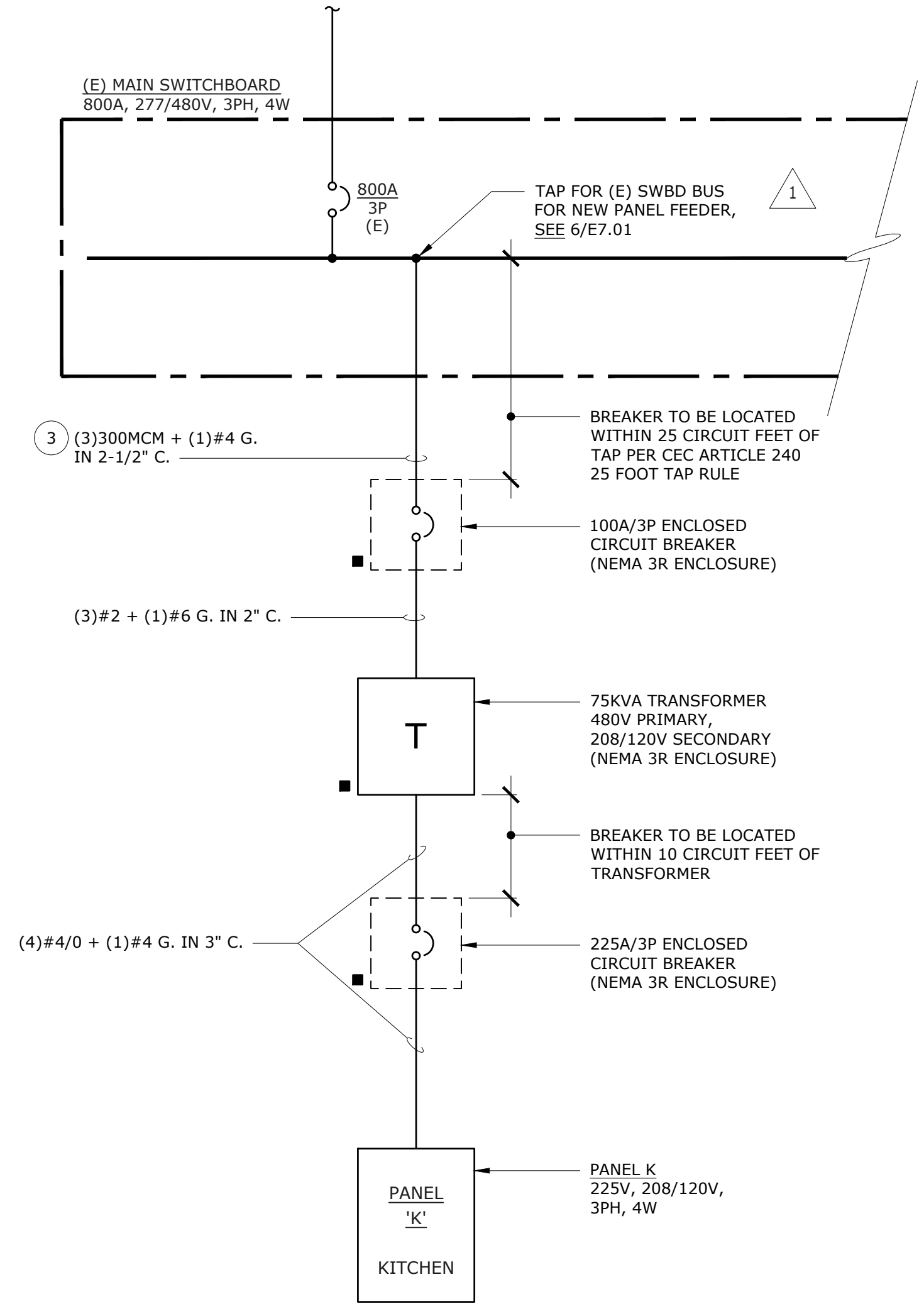
ISSUE DATE	03/15/2024
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▲ DATE	DESCRIPTION

SHEET TITLE
**SECOND FLOOR
PLAN - ELECTRICAL**

SHEET NUMBER

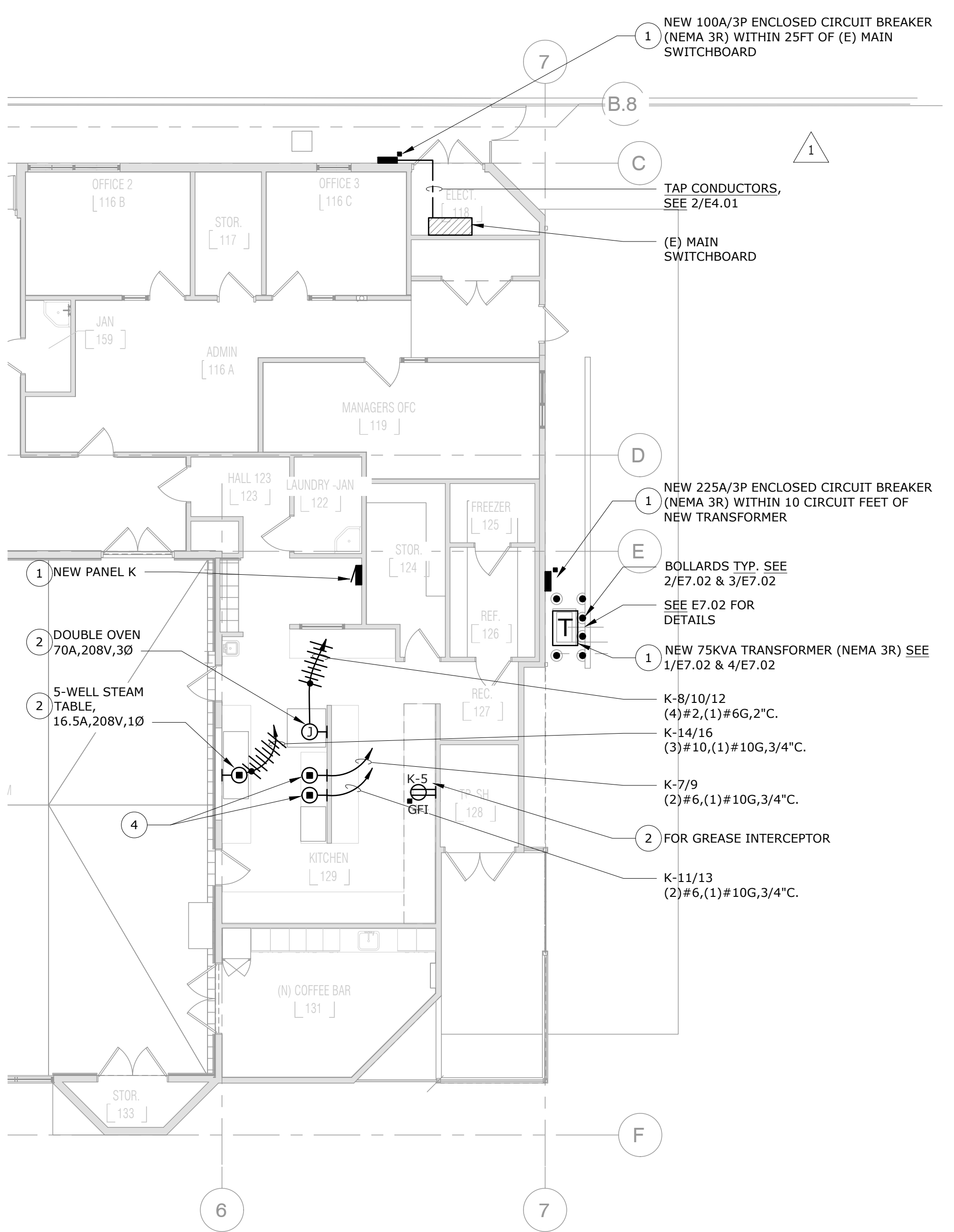
ELECTRICAL LOAD CALCULATION

LOAD	KVA
NORTH BERKELEY SENIOR CENTER EXISTING MAIN SWITCHBOARD 'MSB'	
EXISTING ELECTRICAL LOAD PER PG&E DATA 800AMP, 277/480VOLTS, 3PHASE, 4WIRE METER #1009409240 PER NEC 220.87: Load x 125% =	48.00 60.00
NEW SENIOR CENTER	
PANEL HC	
HVAC CU-1	14.67
HVAC CU-1	14.67
HVAC EWH-1	54.00
XFMR TEV	13.40
HVAC FC-1	7.00
HVAC EC-1	34.00
PANEL HE (LESS PANELS LE & ME)	19.32
PANEL LE (SECTION 1)	31.08
PANEL LE (SECTION 2)	21.27
PANEL ME	60.81
PANEL HE SUB-TOTAL	132.48
NEW KITCHEN PANEL K	41.39
TOTAL KVA	371.61
TOTAL LOAD AMPS @ 277/480V:	445.93
TOTAL AMPS X 1.25%:	557.42
EXISTING MAIN ELECTRICAL SERVICE: 800 AMPS @ 277/480V, 3PH, 4W	



PARTIAL SINGLE LINE DIAGRAM

SCALE: NONE



KITCHEN FLOOR PLAN - ELECTRICAL

SCALE: 1/8" = 1'-0"

PANEL K

LOAD DESCRIPTION												LOAD DESCRIPTION											
TYPE	A	B	C	BRKR.	CKT.	CKT.	BRKR.	A	B	C	TYPE	TYPE	A	B	C	TYPE	TYPE	A	B	C			
SPARE				20/1	1	2					SPACE					SPACE							
SPARE				20/1	3	4					SPACE					SPACE							
GREASE INTERCEPTOR	M		1.20	20/1	5	6																	
DUAL HOB	K	2.80		60/2	7	8		8.33	8.33		K					K							
DUAL HOB	K		2.80		9	10	90/3				K					K							
DUAL HOB	K		2.80		11	12					K					K							
DUAL HOB	K	2.80		60/2	13	14	30/2	2.00			K					K							
DUAL HOB	K		2.80		15	16					K					K							
DUAL HOB	K				17	18																	
DUAL HOB	K				19	20																	
DUAL HOB	K				21	22																	
DUAL HOB	K				23	24																	
DUAL HOB	K				25	26																	
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DUAL HOB	K				31	32																	
DUAL HOB	K				33	34																	
DUAL HOB	K				35	36																	
DUAL HOB	K				37	38																	
DUAL HOB	K				39	40																	
DUAL HOB	K				41	42																	
DUAL HOB	K								10.33	10.33	8.33												
DUAL HOB	K																						

DEMAND LOAD SUMMARY			
TYPE	CONN KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": NON-CONTINUOUS / MISC. LOADS	1.20	100%	1.20
TYPE "L": LIGHTING / CONTINUOUS LOADS	0.00	125%	0.00
TYPE "R": RECEPTACLES (FIRST 10KVA)	0.00	100%	0.00
TYPE "R": RECEPTACLES (OVER 10KVA)	0.00	50%	0.00
TYPE "K": KITCHEN APPLIANCE LOADS	40.19	65%	26.12
TOTALS:	41.39		27.32

PHASE A: 15.93 KVA
PHASE B: 13.13 KVA
PHASE C: 12.33 KVA
132.75 MAX AMPS / PHASE

NUMBERED SHEET NOTES

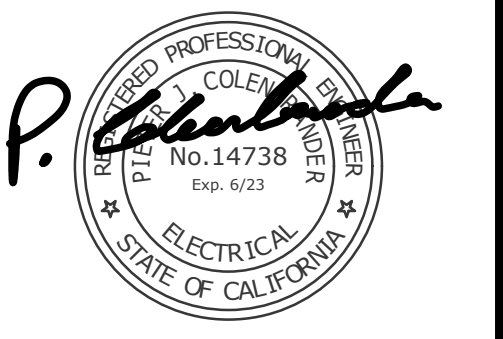
- 1 VERIFY EXACT LOCATIONS WITH ARCHITECT PRIOR TO ROUGH-IN & INSTALLATION.
- 2 FOR NEW KITCHEN EQUIPMENT, PROVIDE AND INSTALL CONNECTIONS AS REQUIRED BY EQUIPMENT MANUFACTURER. CONNECT COMPLETE. VERIFY EXACT LOCATIONS WITH ARCHITECT.
- 3 FEEDER TAP TO BE BASED ON NEC/CEC 240.21(B)(2) FOR TAPS NOT OVER 25 FEET LONG. THIS CODE SECTION REQUIRES THE AMPACITY OF THE TAP CONDUCTORS TO BE NOT LESS THAN ONE-THIRD OF THE RATING OF THE OVERCURRENT DEVICE PROTECTING THE FEEDER CONDUCTORS WHICH IN THIS CASE IS THE MAIN 800AMP SERVICE DISCONNECT. BASED ON THE CODE REQUIREMENTS THE TAP CONDUCTORS NEED TO BE RATED AT 267AMPS. BASED ON NEC/CEC 240.21(B) THE USE OF THE NEXT HIGHER STANDARD SIZE PROVISIONS OF 240.4(B) IS NOT PERMITTED FOR FEEDER TAP CONDUCTORS. THEREFORE THE FEEDER TAP CONDUCTORS SHALL BE 300MCM.
- 4 PROVIDE AND INSTALL 60AMP, 208-240V, SINGLE PHASE RECEPTACLES, NEMA 6-30R FOR EACH DUAL HOB. COORDINATE LOCATION PRIOR TO ROUGH-IN. EACH DUAL HOB IS 24AMPS, 208V, SINGLE PHASE.

GENERAL NOTES

- A. DEDICATED NEUTRALS REQUIRED FOR ALL BRANCH CIRCUITS.
- B. ELECTRICAL DEVICES ON FIRE-RATED WALLS TO BE INSTALLED 24" APART MINIMUM.

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CITY OF BERKELEY NORTH BERKELEY SENIOR CENTER SEISMIC UPGRADES and RENOVATIONS

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ISSUE DATE	03/15/2024
N&T JOB #	X
REVISIONS	
DATE	DESCRIPTION
3/19/23	CITY BACKCHECK

SHEET TITLE
KITCHEN - ELECTRICAL

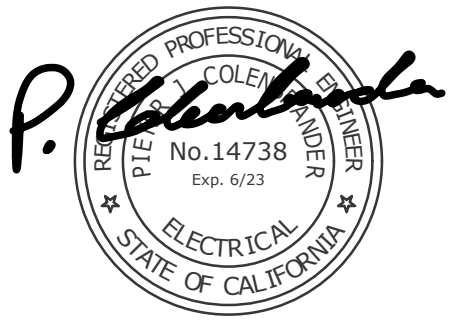
SHEET NUMBER

E4.01

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ISSUE DATE 03/15/2024

N&T JOB # X

REVISIONS	DATE	DESCRIPTION

SHEET TITLE
SCHEDULES

SHEET NUMBER

E6.01

(E) PANEL LE													
VOLTS: 120 / 208 V (SECTION 1 - RIGHT HAND SIDE)							MAIN BRKR: 225A MCB						
PHASE: 3 PH							FEEDER: SEE SINGLE LINE						
WIRE: 4 W							CONDUIT: SEE SINGLE LINE						
BUSSING: 225A							MOUNTED: SURFACE						
POLES: 42P							AIC RATING: 65k						
LOAD DESCRIPTION	TYPE	A	B	C	BRKR.	CKT.	CKT.	BRKR.	A	B	C	TYPE	LOAD DESCRIPTION
AUTO DOOR - ENTRY	M	1.00			20/1	1	2	20/1	0.30			M	FIRE ALARM CONTROL PANEL
AUTO DOOR - ENTRY	M		1.00		20/1	3	4	20/1		0.90		R	REC - SHOP 11, STOR 112, MECH 113
AUTO DOOR - MENS RR 157	M			1.00	20/1	5	6	20/1			0.72	R	REC - SHOP 11
AUTO DOOR - WOMENS RR 161	M	1.00			20/1	7	8	20/1	0.54			R	REC - SHOP 11
REC - TELE TERM BOARD	R		0.18		20/1	9	10	20/1		1.00		R	REC - COPY 148
REC - TELE EQUIPT	R			0.18	20/1	11	12	20/1			1.00	R	REC - COPY 148
REC - TELECOM RACK	R	0.36			20/1	13	14	20/1	0.90			R	REC - ADMIN 153
REC - OFFICE 116	R		0.90		20/1	15	16	20/1		1.08		R	REC - ADMIN 153, FRONT DESK 154
REC - OFFICE 116B	R			1.08	20/1	17	18	20/1			1.08	R	REC - FRONT DESK 154
REC - OFFICE 116A, JAN 159	R	1.08			20/1	19	20	20/1	0.90			R	REC - MULTIPURPOSE 136
REC - OFFICE 119	R		1.08		20/1	21	22	20/1		0.90		R	REC - MULTIPURPOSE 136
REC - OFFICE 119	R			1.08	20/1	23	24	20/1			0.72	R	REC - MULTIPURPOSE 136
REC - RR 203, 206	R	0.36			20/1	25	26	20/1	1.08			R	REC - COFFEE 131, DINING 132
SEGMENT MANAGER	L		0.20		20/1	27	28	20/1		0.90		R	REC - DINING 132
LTG - TRACK	L			0.60	20/1	29	30	20/1			1.00	R	REC - COFFEE 131
LTG - TRACK	L	0.60			20/1	31	32	20/1	1.00			R	REC - COFFEE 131
SPARE					20/1	33	34	20/1		1.00		R	REC - COFFEE 131
(E) FREEZER	M			1.00	20/2	35	36	20/1			0.18	R	REC - KITCHEN
(E) REFRIG	M	1.00			20/2	37	38	20/1	0.18			R	REC - KITCHEN
(E) REFRIG	M		1.00		20/2	39	40	20/1				R	SPARE
(E) REFRIG	M			1.00	20/2	41	42	20/1				R	SPARE
		5.40	4.36	5.94				4.90	5.78	4.70			

DEMAND LOAD SUMMARY			
TYPE "M": NON-CONTINUOUS / MISC. LOADS	8.30	100%	8.30
TYPE "L": LIGHTING / CONTINUOUS LOADS	1.40	125%	1.75
TYPE "R": RECEPTACLES (FIRST 10KVA)	10.00	100%	10.00
TYPE "R": RECEPTACLES (OVER 10KVA)	11.38	50%	5.69
TYPE "H": HVAC / MECHANICAL LOADS	0.00	100%	0.00
TOTALS	31.08		25.74

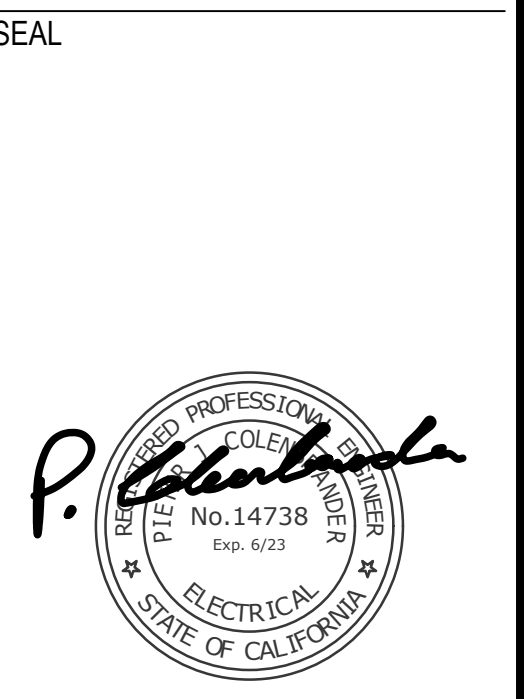
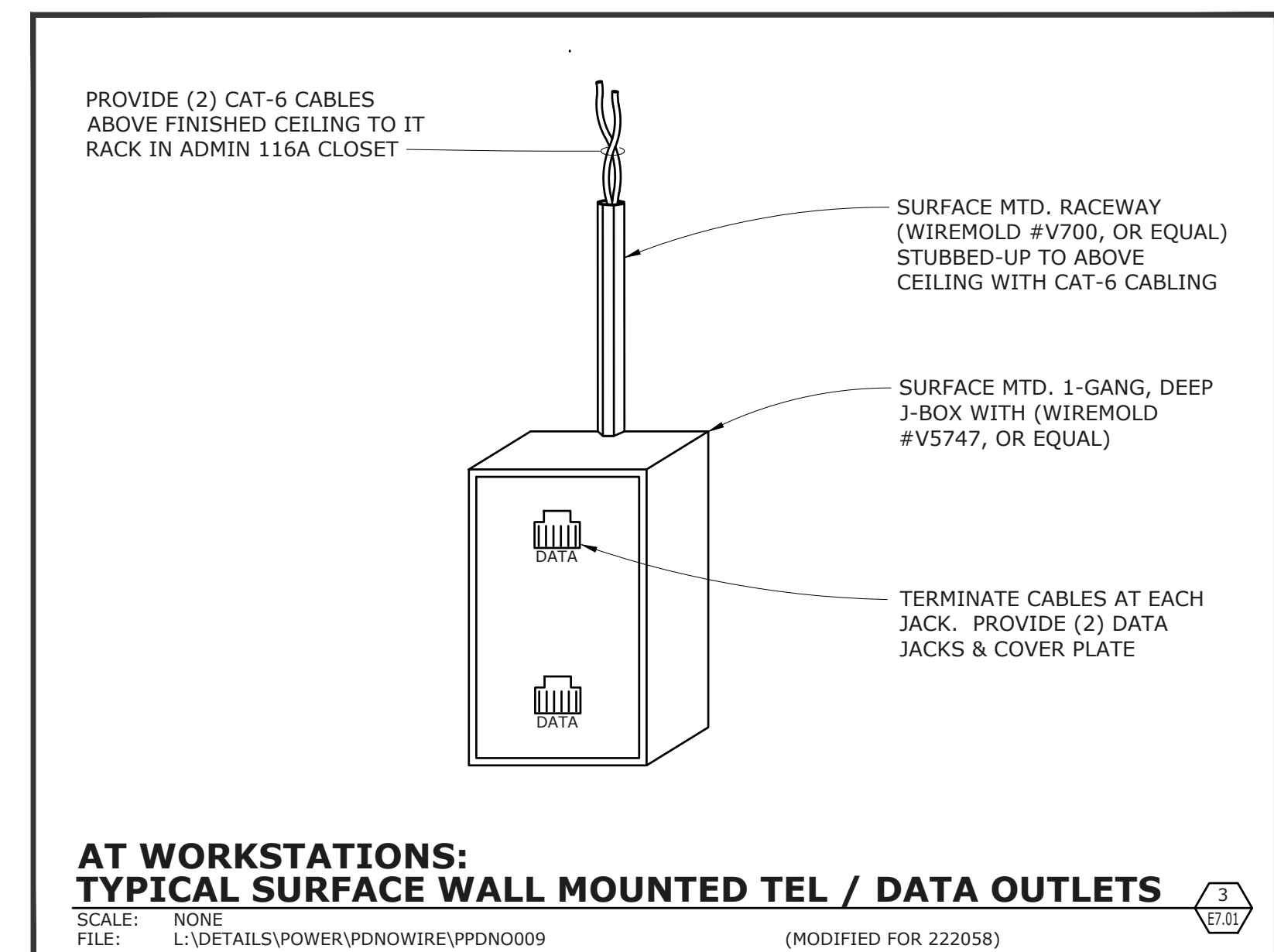
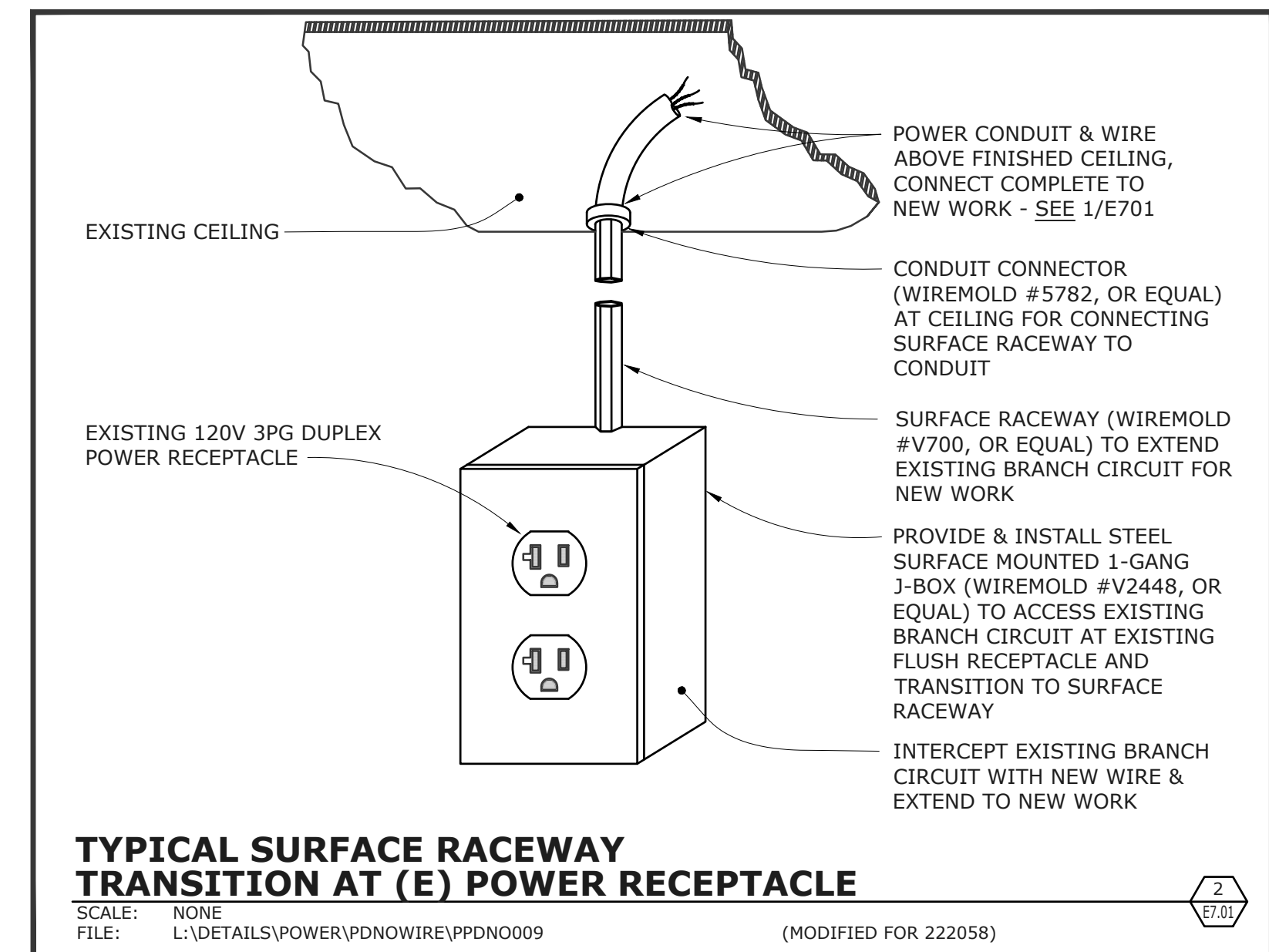
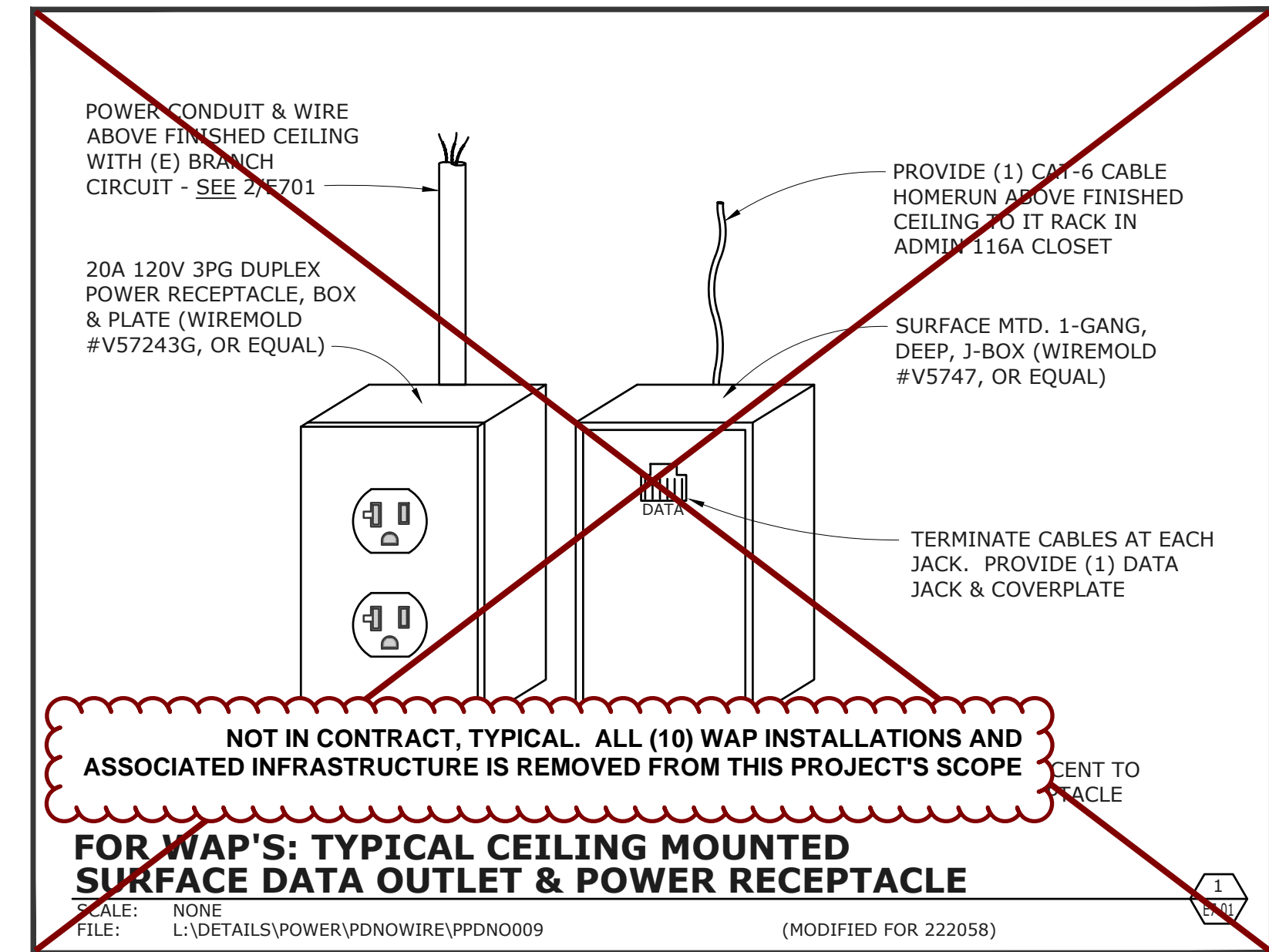
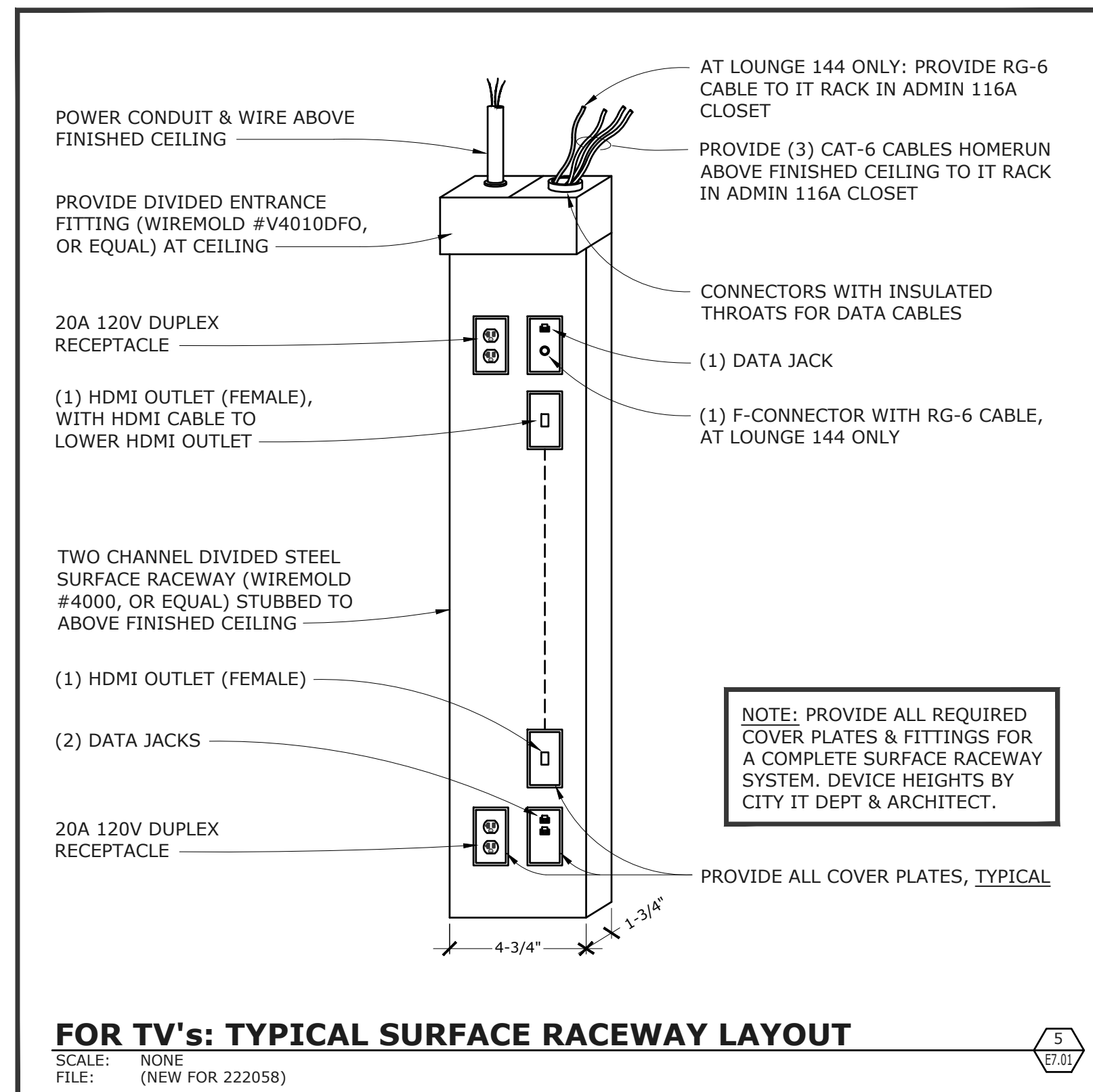
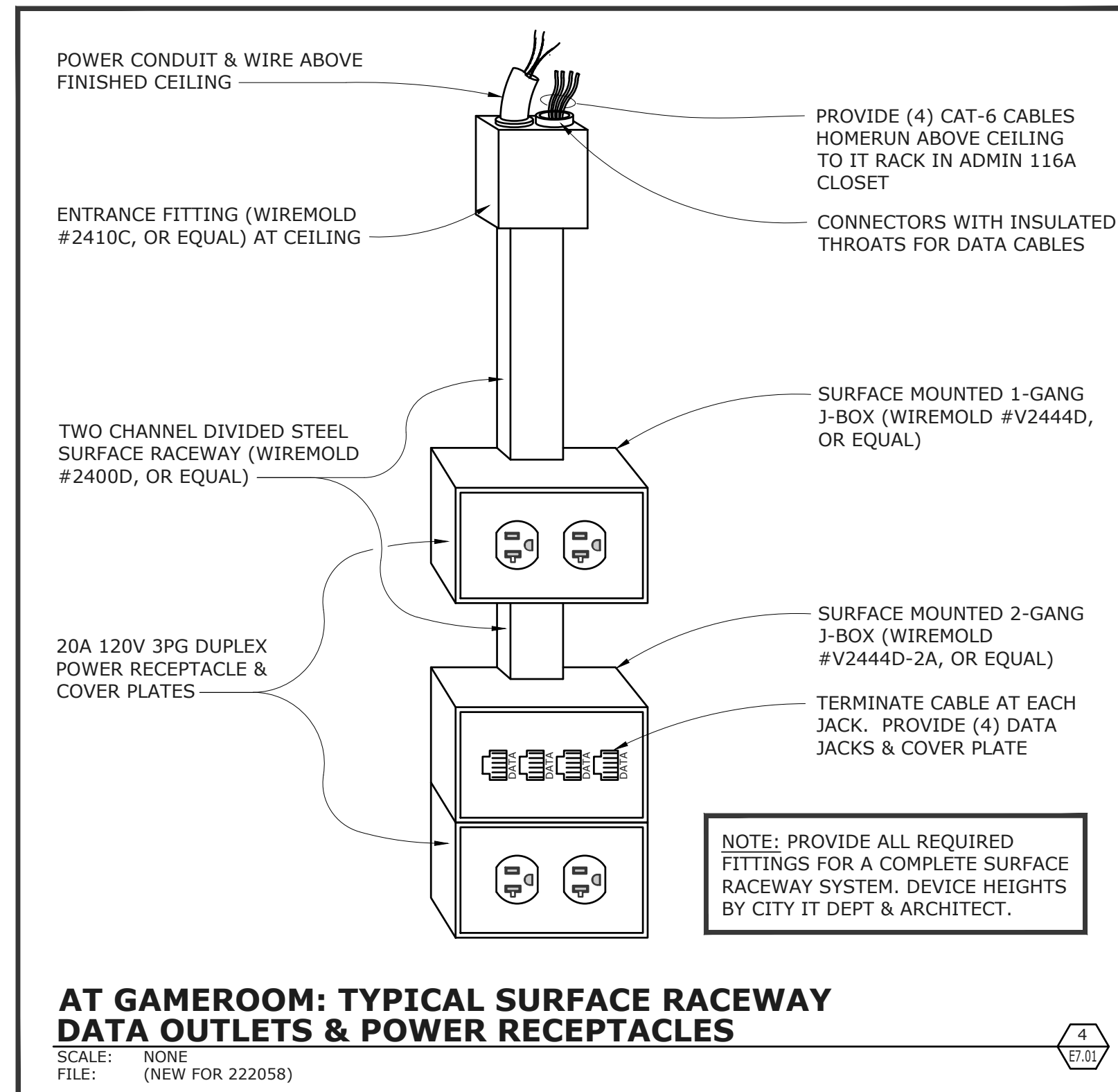
THIS SECTION PHASE A:	10.30	KVA
THIS SECTION PHASE B:	10.14	KVA
THIS SECTION PHASE C:	10.64	KVA
THIS SECTION:	88.67	MAX AMPS / PHASE

PANEL TOTAL PHASE A:	18.70	KVA
PANEL TOTAL PHASE B:	15.93	KVA
PANEL TOTAL PHASE C:	17.72	KVA
TOTAL:	155.83	MAX AMPS / PHASE

(E) PANEL LE													
VOLTS: 120 / 208 V (SECTION 2 - LEFT HAND SIDE)							MAIN BRKR: SUB FED, FEED THRU LUGS						
PHASE: 3 PH							FEEDER:						
WIRE: 4 W							CONDUIT:						
BUSSING: 225A							MOUNTED:						
POLES: 42P							AIC RATING:						
LOAD DESCRIPTION	TYPE	A	B	C	BRKR.	CKT.	CKT.	BRKR.	A	B	C	TYPE	LOAD DESCRIPTION
HVAC - EF 2	H	0.53			20/1	43	44	20/1	0.72			R	REC - TV WORKSHOP 111, HEALTH 103A
HVAC - RR 157, 161	H		0.60		20/1	45	46	20/1		0.72		R	REC - TV WORKSHOP 111, HEALTH 103A
SPARE					20/1	47	48	20/1			1.08	R	REC - GAME RM 102
HVAC - EF1	H	1.66			20/1	49	50	20/1				R	SPARE
SPARE					20/1	51	52	20/1				R	SPARE
AUTO DOOR - RR 105	M			1.00	20/1	53	54	20/1				R	SPARE
AUTO DOOR - RR 203	M	1.00			20/1	55	56	20/1				R	SPARE
AUTO DOOR - RR 206	M		1.00		20/1	57	58	20/1				R	SPARE
REC - MP 136	R			0.72	20/1	59	60	20/1				R	SPARE
REC - MP 136	R	0.36			20/1	61	62	15/2	0.05			H	HVAC - AC1, AC2
REC - MP 136	R		0.36		20/1	63	64			0.05		H	
REC - CR A 212	R			0.54	20/1	65	66	20/2			0.50	H	HVAC - AC3 - AC18
REC - STOR 209C	R	0.36			20/1	67	68		0.50			H	
REC - STOR 209C	R		0.36		20/1	69	70	15/2		0.20		H	HVAC - BC1
REC - STOR 209C	R			0.54	20/1	71	72				0.20	H	
REC - STOR 209C	R	0.72			20/1	73	74					H	S P A C E
SPARE					20/1	75	76					H	S P A C E
SPARE					20/1	77	78					H	S P A C E
SPARE					20/1	79	80		2.50			H	
SPARE					20/1	81	82	40/3		2.50		H	HVAC - CU2
SPARE					20/1	83	84				2.50	H	
		4.63	2.32	2.80				3.77	3.47	4.28			

DEMAND LOAD SUMMARY			
TYPE "M": NON-CONTINUOUS / MISC. LOADS	3.00	100%	3.00
TYPE "L": LIGHTING / CONTINUOUS LOADS	0.00	125%	0.00
TYPE "R": RECEPTACLES (FIRST 10KVA)	6.48	100%	6.48
TYPE "R": RECEPTACLES (OVER 10KVA)	0.00	50%	0.00
TYPE "H": HVAC / MECHANICAL LOADS	11.79	100%	11.79
TOTALS	21.27		21.27

THIS SECTION PHASE A:	8.40	KVA
THIS SECTION PHASE B:	5.79	KVA
THIS SECTION PHASE C:	7.08	KVA
THIS SECTION:	70.00	MAX AMPS / PHASE



CITY OF BERKELEY NORTH BERKELEY SENIOR CENTER SEISMIC UPGRADES and RENOVATIONS

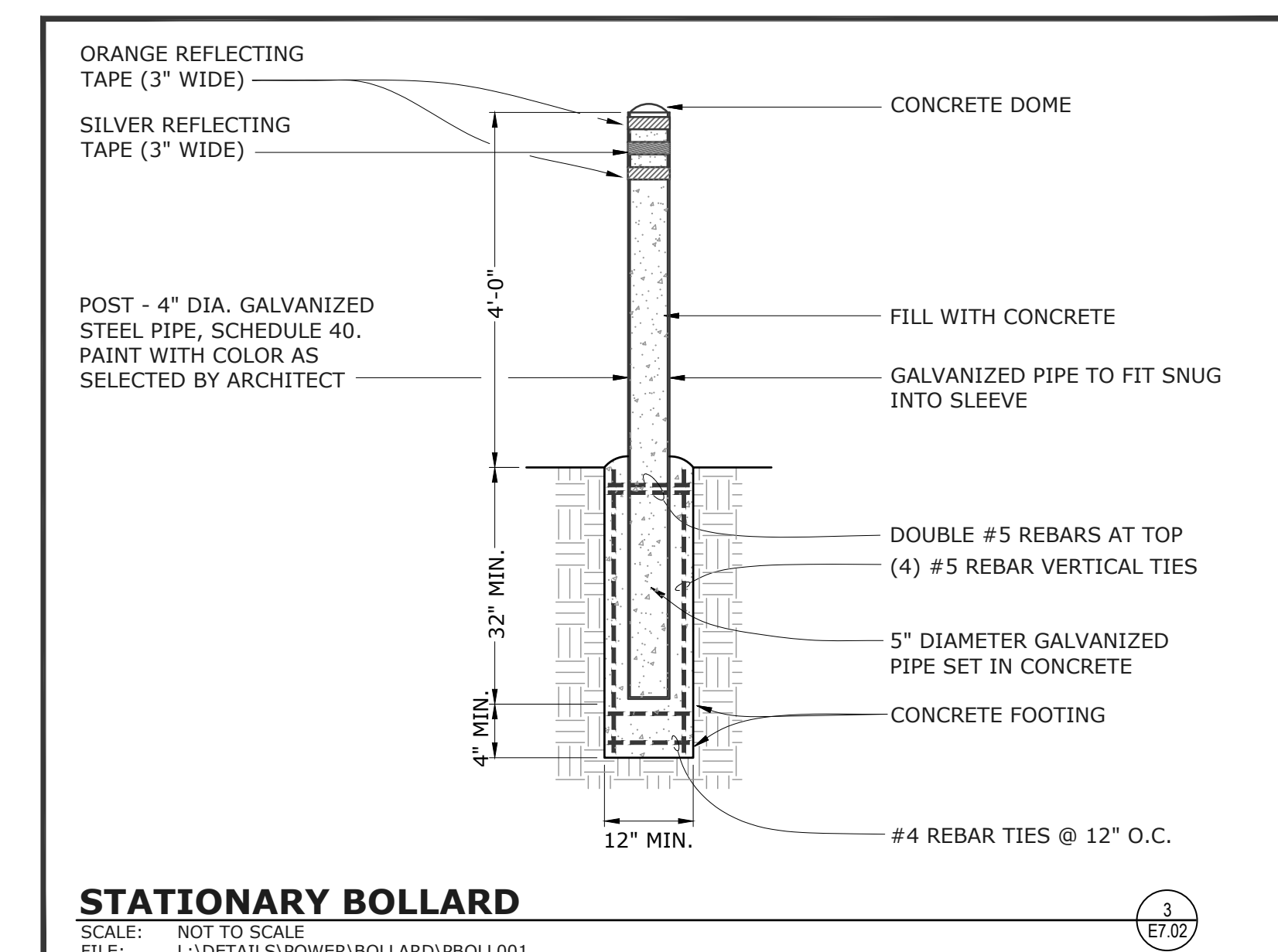
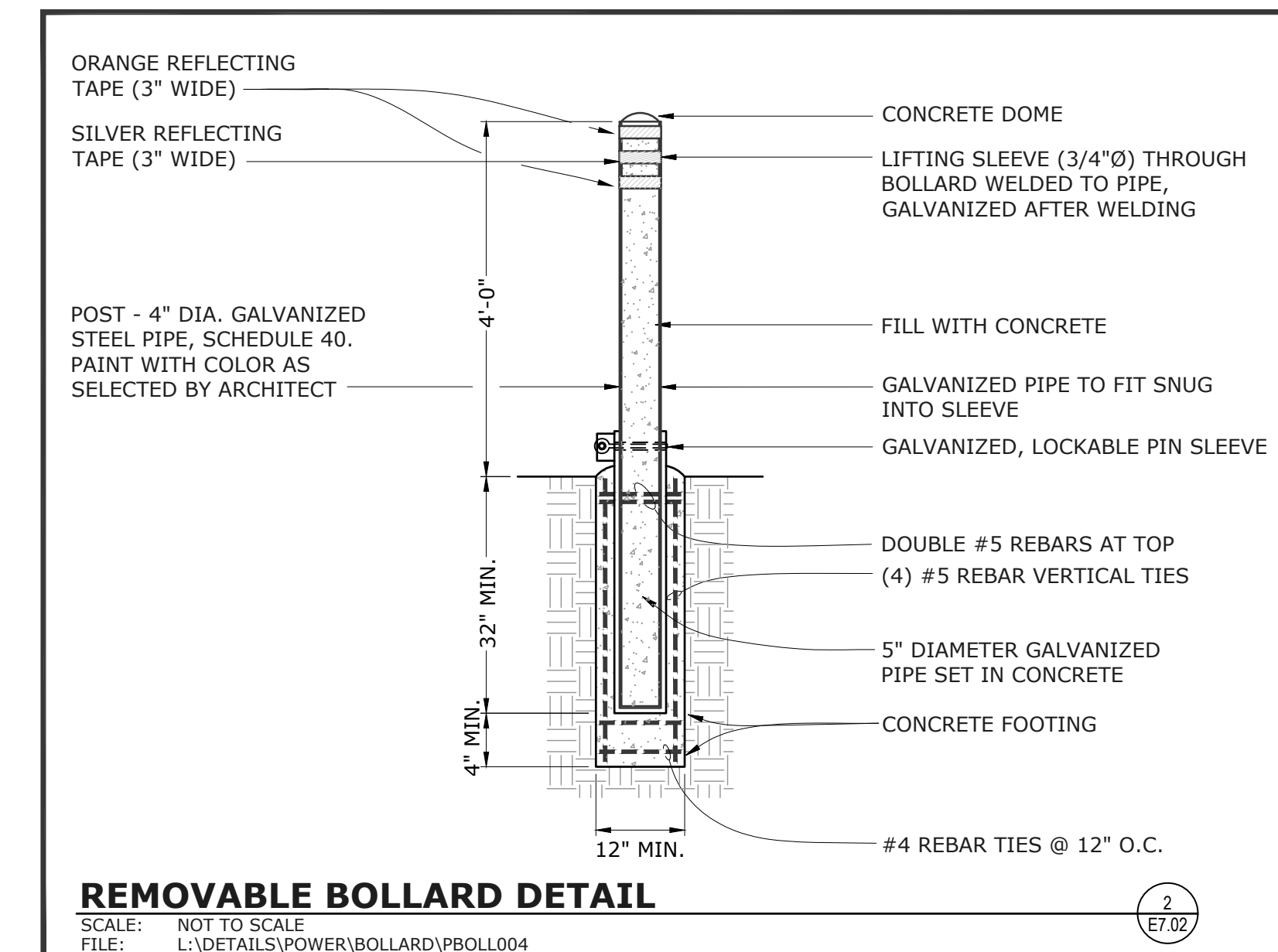
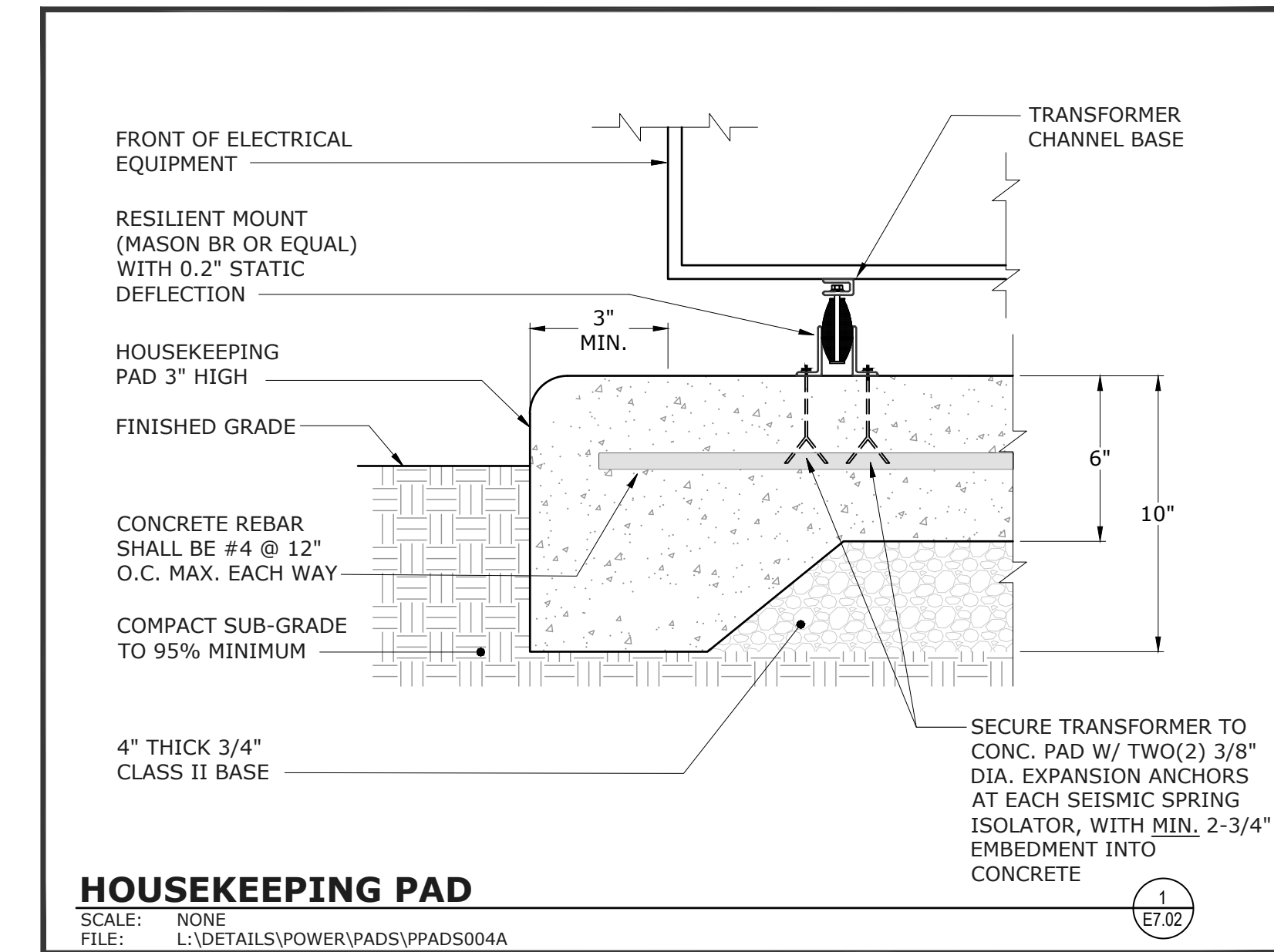
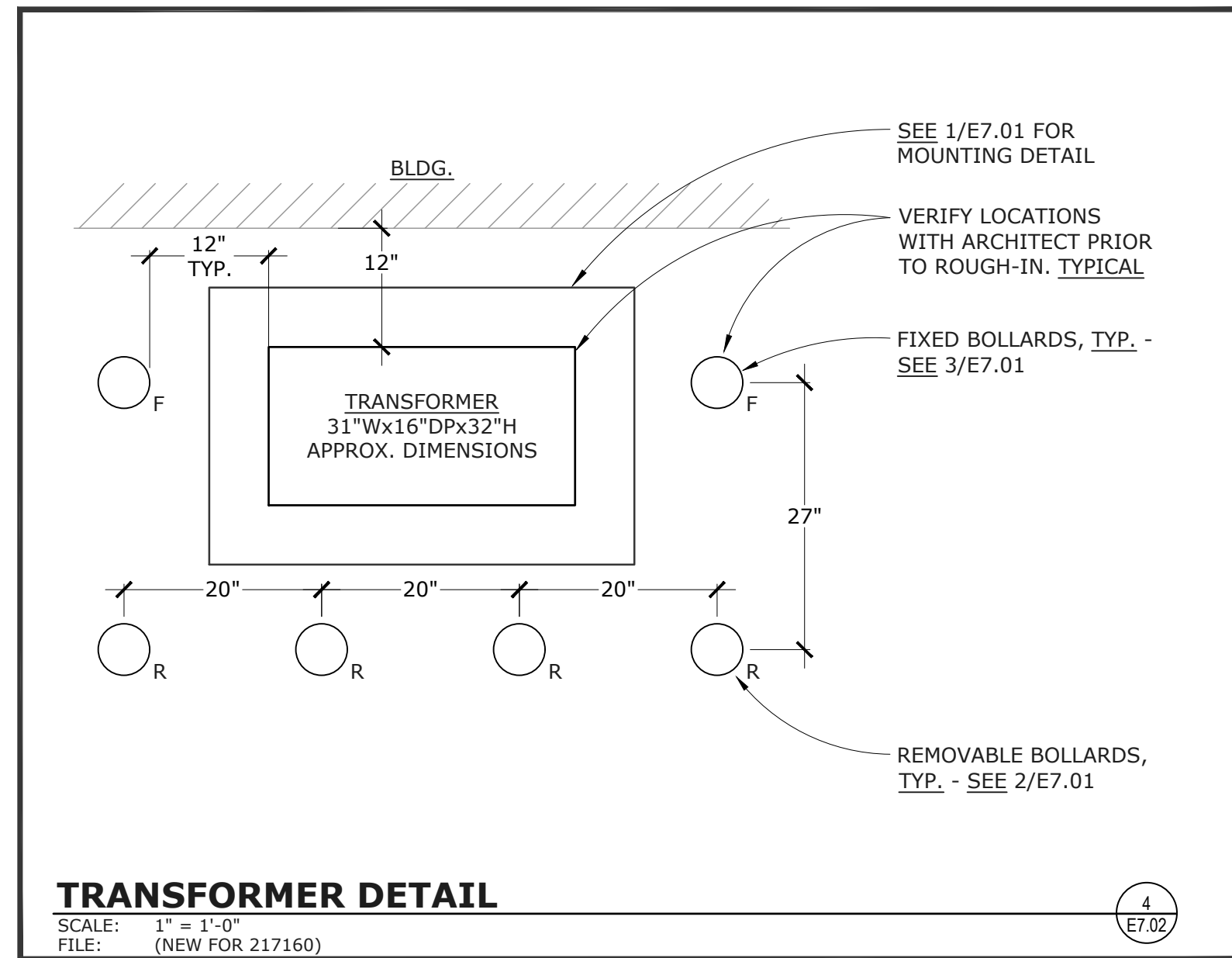
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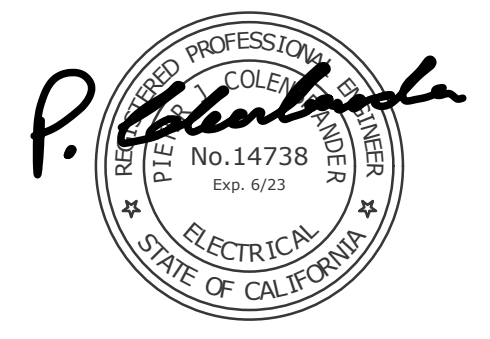
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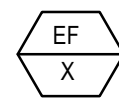
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DATE	DESCRIPTION

SHEET TITLE
DETAILS

SHEET NUMBER

E7.02



FAN SCHEDULE

UNIT NUMBER	FAN LOCATION	SERVICE	RATED CFM	RATED S.P. (IN. H ₂ O)	FAN RPM	DESIGN CFM	FAN TYPE	MOTOR DATA @ 60 HZ					DRIVE TYPE	HI/LO NOISE RATING dBA	MANUFACTURER MODEL NO.	SEE NOTES BELOW FOR ADDITIONAL REQUIREMENTS	WEIGHT POUNDS	
								BHP OR WATTS	MHP	RPM	VOLTS	PHASE						SPEED CONTROL
SF-1	1ST FLOOR	WORKSHOP	450	0.75	1479	450	D	168W	-	1479	120	1	YES	DIRECT	49	LOREN COOK 105KSPD(VF)	ECM MOTOR W/ON BOARD SETTING	118
SF-2	1ST FLOOR	HEALTH ROOM 113A	150	0.20	1314	150	E	27.3W	27.3W	-	120	1	YES	DIRECT	0.3 SONE	PANASONIC WHISPER FV-15NLF51	ECM MOTOR W/ON BOARD SETTING	17
SF-3	1ST FLOOR	MEETING ROOM 103B	150	0.20	1314	150	E	27.3W	27.3W	-	120	1	YES	DIRECT	0.3 SONE	PANASONIC WHISPER FV-15NLF51	ECM MOTOR W/ON BOARD SETTING	17

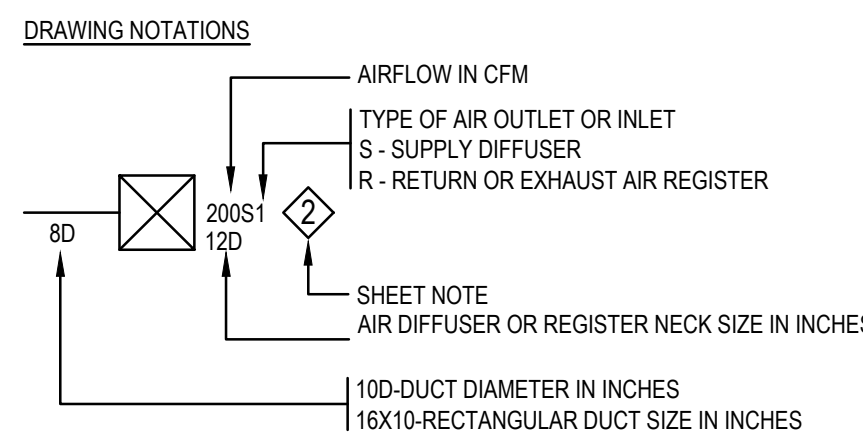
FAN SHALL MEET WITH THE FOLLOWING REQUIREMENTS:

- ALL UNITS SHALL HAVE SINGLE POINT ELECTRICAL CONNECTION.
- SF-1 FANS SHALL BE CENTRIFUGAL TYPE ROOF EXHAUST VENTILATOR, PAINTED STEEL CONSTRUCTION, WELDED HOUSING WITH VENTED MOTOR ENCLOSURE.
- ALL FANS SHALL BE PROVIDED WITH HEAVY DUTY SELF-ALIGNING BALL OR ROLLER PILLOW BLOCK BEARINGS, POLISHED SOLID STEEL SHAFT AND FULLY WELDED CENTRIFUGAL WHEEL AND ADJUSTABLE PITCH DRIVE.
- SF-1: UNIT SHALL BE PROVIDED WITH LOCAL POWER DISCONNECT AND VIBRATION ISOLATORS.
- ALL FANS SHALL BE PROVIDED WITH HIGH EFFICIENCY CLASS B MOTOR MEETS EPACT AND NEMA 1210.
- NOISE GENERATED SHALL NOT EXCEED THE INDICATED REQUIREMENTS.
- SPEED CONTROLLER/ADJUSTMENT.
- SF-2 AND SF-3: GALVANIZED HOUSING, FULLY INSULATED, BUILT-IN CONTROLS FOR CFM SETTING, WITH 9 SPEED SETTINGS FANS WITH ECM MOTOR, PRE-WIRED POWER, THERMAL CUTOFF FUSE AND SOLID STATE MOTOR CONTROL WITH ON-BOARD SPEED SELECTOR 50 TO 150 CFM WITH MERV 8 FILTER.
- SF-1: PROVIDE WASHABLE 35% EFFICIENT FILTERS AND EXPANDED METAL REMOVABLE ALUMINUM SCREEN.

FAN TYPE DESIGNATION
A- CENTRIFUGAL UTILITY FAN
B- WALL MOUNTED PROPELER FAN
C- CENTRIFUGAL FAN, CEILING MOUNTED
D- ROOF VENTILATOR
E- IN-LINE

AIR INLET/OUTLET SCHEDULE (DIFFUSERS, REGISTERS & GRILLES)

SYMBOL	TYPE	DESCRIPTION
S1	CEILING EXHAUST AIR REGISTER	"TITUS" PAS TYPE CEILING DIFFUSER, STEEL CONSTRUCTION, SQUARE NECK BORDER T-BAR MOUNTING FRAME TO MATCH CEILING SYSTEM. PROVIDE DIFFUSER WITH OFF-WHITE FINISH.
R1	CEILING EXHAUST AIR REGISTER	"TITUS" PAR TYPE CEILING RETURN REGISTER, STEEL CONSTRUCTION, SQUARE NECK BORDER T-BAR MOUNTING FRAME TO MATCH CEILING SYSTEM. PROVIDE DIFFUSER WITH OFF-WHITE FINISH.



- COORDINATE CEILING, WALL SUPPLY DIFFUSER AND EXHAUST REGISTER FOR EXACT LOCATION WITH ARCHITECTURAL REFLECTED CELING PLAN.
- ALL CEILING SUPPLY DIFFUSERS ARE 4-WAY THROW UNLESS OTHERWISE NOTED.
- PROVIDE MANUAL AIR DAMPERS AT EACH BRANCH DUCT TO A SINGLE DIFFUSER, REGISTER OR GRILLE.
ALL VOLUME DAMPER SHALL BE OPPOSED BLADE TYPE. ROUND DUCT DAMPER SHALL BE TITUS AG-75.
- PROVIDE SURFACE MOUNT DIFFUSERS AND REGISTER IN SMALL ROOM WITH GYP CEILING. VERIFY WITH ARCHITECTURAL CEILING PLAN.

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APPROVALS

CITY OF BERKELEY NORTH BERKELEY SENIOR CENTER ROOM MECHANICAL VENTILATION

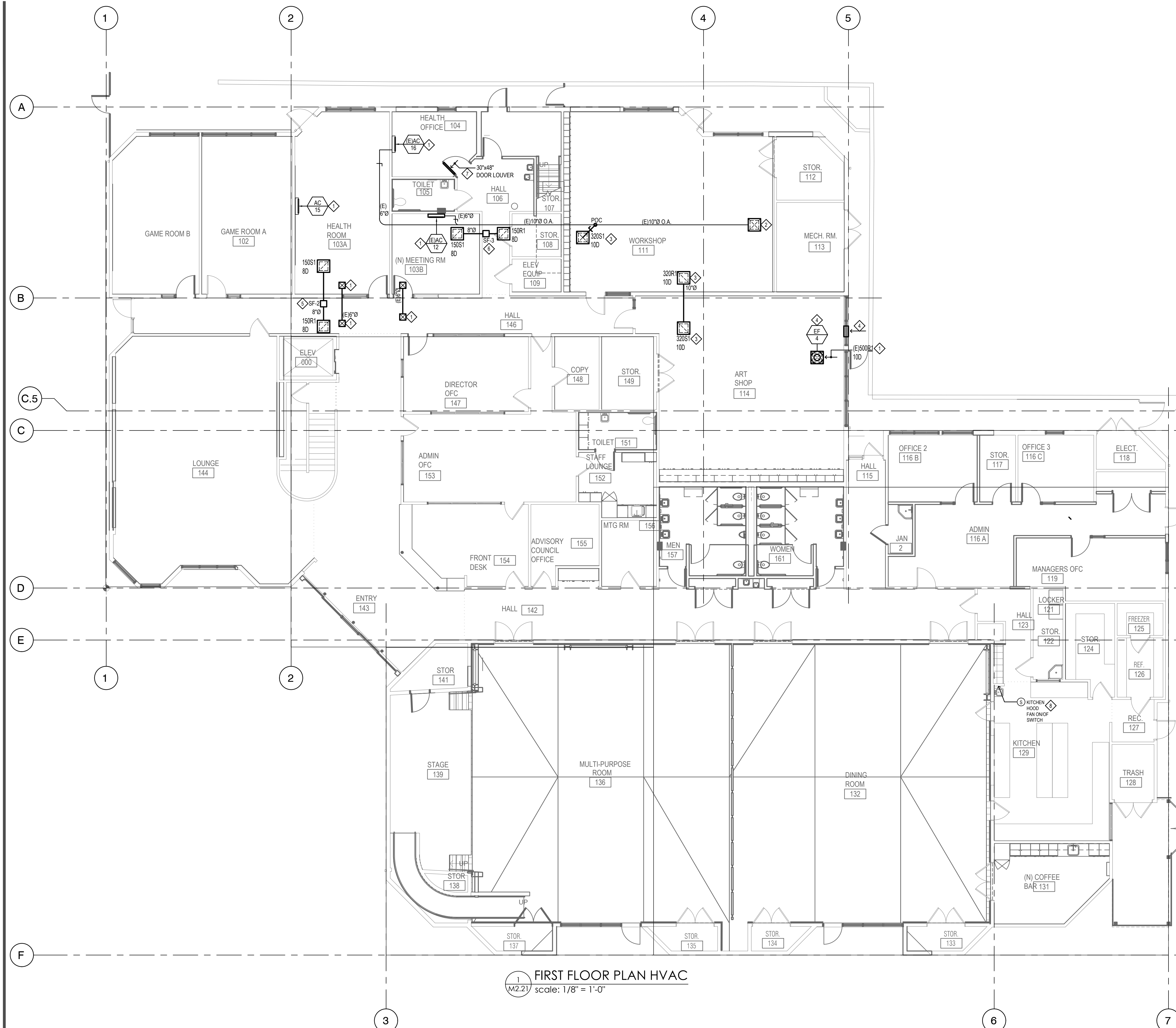
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DATE	DESCRIPTION

SHEET TITLE
EQUIPMENT SCHEDULES

SHEET NUMBER
M1.02



1 FIRST FLOOR PLAN HVAC
 M2.21 scale: 1/8" = 1'-0"

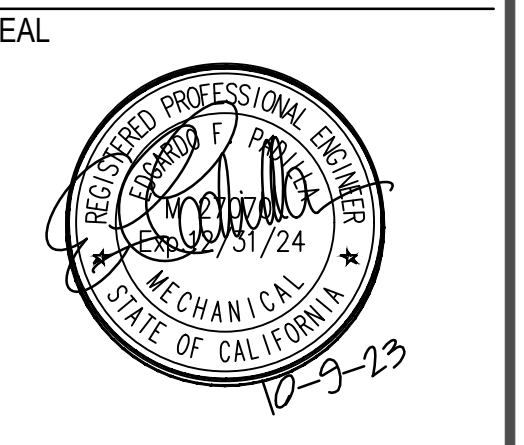
GENERAL NOTES:

- VERIFY EXISTING DUCTS, PIPING AND EQUIPMENT LOCATION PRIOR TO INSTALLATION OF NEW WORK. COORDINATE CLEARANCES AND ACCESS WITH ARCHITECTURAL DRAWINGS. REFERENCE TO DETAILS APPLIES TO ALL MECHANICAL WORK.
- REFER TO ALL DETAILS ON M3.01.
 - CONTRACTOR SHALL DETERMINE THE FINAL LOCATION OF THE FANS AND ROUTING OF DUCTWORK. LOCATE FANS TO CLEAR BUILDING STRUCTURE, EXISTING ELECTRICAL, PIPING AND OTHER OBSTRUCTIONS IN THE CEILING CAVITY. COORDINATE INSTALLATION WITH ARCHITECTURAL DRAWINGS. PROVIDE ADEQUATE ACCESS TO FILTERS MOTORS AND POWER DISCONNECT.

CONSTRUCTION KEYED NOTES:

- ◇ EXISTING AC UNIT, THERMOSTAT, BC CONTROLLER, FAN, DUCT, ROOM AIR TRANSFER DUCT AND REGISTERS, AND PIPING TO REMAIN.
- ◇ WORKSHOP ROOM 111: PROVIDE MECHANICAL VENTILATION. REMOVE AND DISPOSE EXISTING ROOF AIR INTAKE. EXISTING ROOF CURB AND BACKDRAFT DAMPER TO REMAIN. EXISTING OUTSIDE AIR DUCT TO REMAIN. PROVIDE NEW SUPPLY FAN SF-1 POWER AND POWER LOCAL DISCONNECT. INSTALL NEW SUPPLY FAN ON THE EXISTING ROOF CURB. PROVIDE SHEET METAL CURB CAP FOR MOUNTING THE NEW FAN ON THE EXISTING ROOF CURB. SF-1 SHALL BE ENABLED FROM THE EXISTING ROOM OCCUPANCY SENSOR FOR LIGHTING. REFER TO M1.02 FOR SUPPLY FAN SCHEDULED DETAILED REQUIREMENTS. SEE M2.22 FOR FAN LOCATION.
- ◇ WORKSHOP ROOM 111: PROVIDE NEW SUPPLY AIR DIFFUSER. PROVIDE AIR TRANSFERS DUCT AND CEILING MOUNTED AIR REGISTERS BETWEEN WORKSHOP ROOM 111 AND ART SHOP ROOM 114. REFER TO M1.02 FOR AIR OUTLET SCHEDULED REQUIREMENTS. TEST, ADJUST AND BALANCE TO AIRFLOW INDICATED. REFER TO DETAIL 6/M3.03.
- ◇ ART SHOP ROOM 114: PROVIDE MECHANICAL VENTILATION. USE EXISTING EXHAUST ROOM VENTILATION EF-4. PROVIDE CONTROL INTERFACE WITH EXISTING OCCUPANCY SENSOR FOR LIGHTING. EF-4 SHALL BE ENABLED WHEN THE ROOM IS OCCUPIED. EF-4 EXISTING CONTROL FOR ROOM TEMPERATURE WITH LINE VOLTAGE THERMOSTAT SHALL REMAIN. MODIFIED FAN CONTROL CIRCUIT AS REQUIRED.
- ◇ HEALTH ROOM 103A: PROVIDE MECHANICAL VENTILATION. EXISTING AIR TRANSFER DUCT AND REGISTERS TO REMAIN. PROVIDE NEW SUPPLY FAN SF-2 FOR MECHANICAL VENTILATION FROM HALL 146. INSTALL NEW SUPPLY FAN ABOVE THE CEILING OF HEALTH ROOM 103A. PROVIDE SUPPORTS, POWER AND LOCAL POWER DISCONNECT. SF-2 SHALL BE ENABLED FROM THE EXISTING ROOM OCCUPANCY SENSOR FOR LIGHTING. REFER TO M1.02 FOR SCHEDULED FAN REQUIREMENTS. REFER DETAIL 5/M3.03 FOR FAN DETAILED INSTALLATION.
- ◇ MEETING ROOM 103B: PROVIDE MECHANICAL VENTILATION. EXISTING AIR TRANSFER DUCT AND REGISTERS TO REMAIN. PROVIDE NEW SUPPLY FAN SF-3 FOR MECHANICAL VENTILATION. INSTALL NEW SUPPLY FAN ABOVE THE CEILING OF MEETING ROOM 103B. PROVIDE SUPPORTS, POWER AND LOCAL POWER DISCONNECT. SF-3 SHALL BE ENABLED FROM THE EXISTING ROOM OCCUPANCY SENSOR FOR LIGHTING. REFER TO M1.02 FOR SCHEDULED FAN REQUIREMENTS. REFER DETAIL 5/M3.03 FOR FAN DETAILED INSTALLATION.
- ◇ HEALTH OFFICE 104: PROVIDE 30"x48" DOOR LOUVER FOR AIR TRANSFER ROOM VENTILATION FROM HALL 106. TEST, ADJUST AND OBTAIN 40 CFM OUTSIDE AIR VENTILATION TO THE INLET OF EXISTING AC-16 FROM THE NEW SF-1. INCLUDE THE AIRFLOW READING IN THE TAB REPORT.
- ◇ KITCHEN HOOD EXHAUST FAN ON/OFF SWITCH: REMOVE EXISTING KITCHEN HOOD FAN SWITCH PANEL. PROVIDE NEW ON/OFF FAN SWITCH AND INTERLOCK WITH EVAPCOOLER EC-1. REFER TO M2.21 FOR DETAILED REQUIREMENT.

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APPROVALS

**CITY OF BERKELEY
 NORTH BERKELEY SENIOR CENTER
 ROOM MECHANICAL VENTILATION**

1901 HEARST ST.
 BERKELEY CA 94704

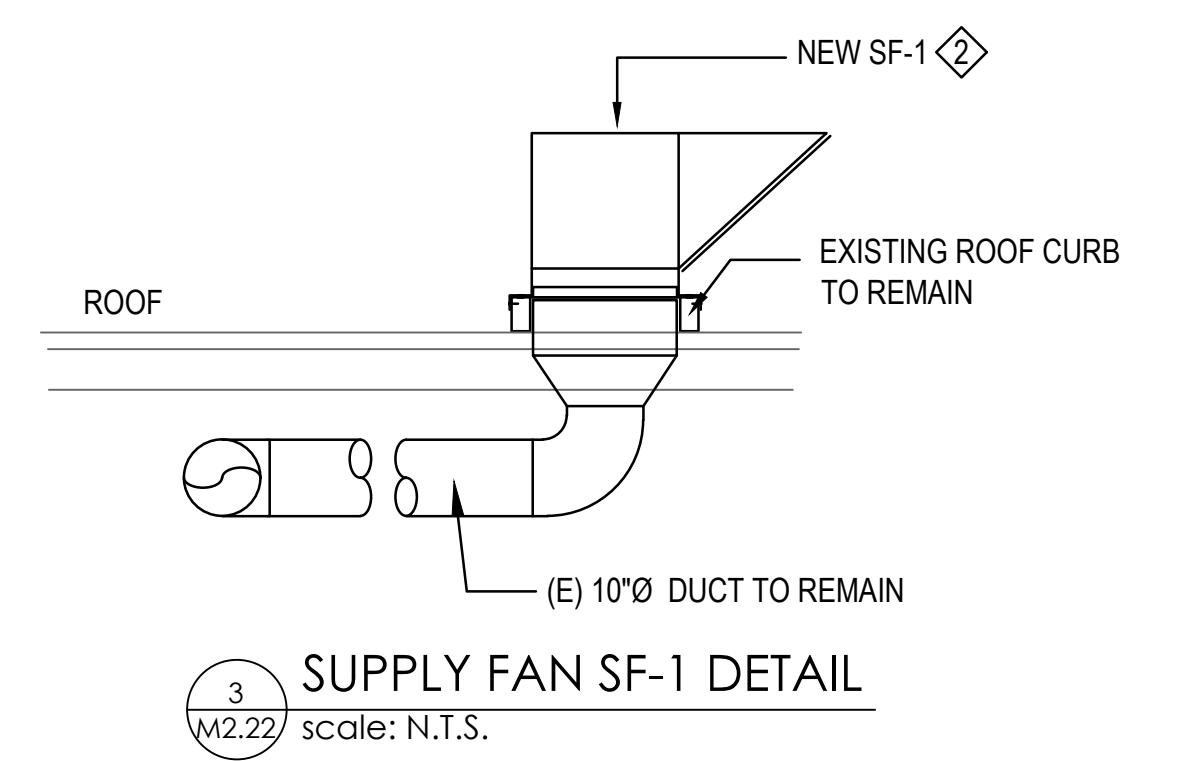
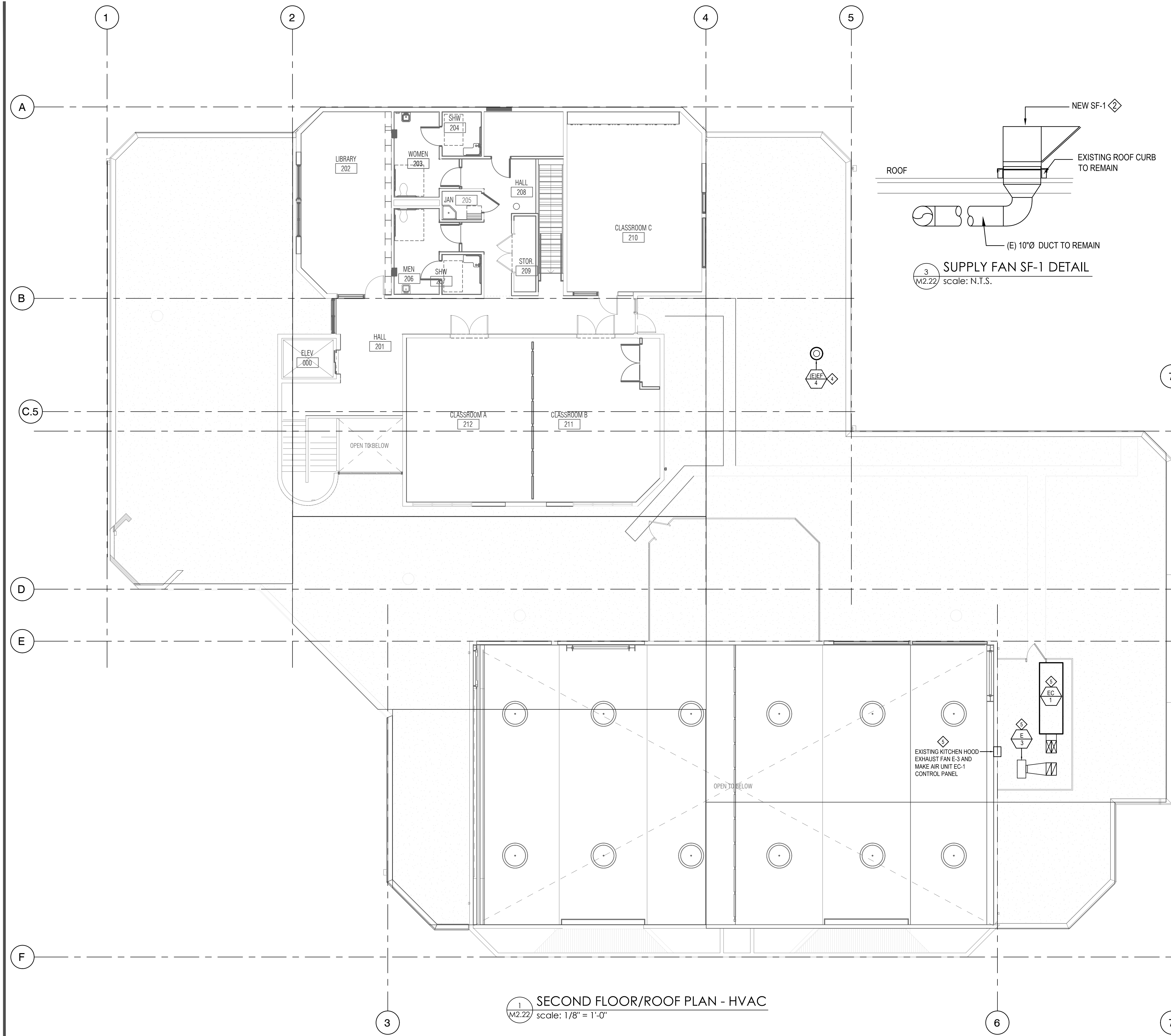
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ISSUE DATE	03/15/2024
N&T JOB #	21603.00
REVISIONS	
△ DATE	DESCRIPTION

SHEET TITLE
FIRST FLOOR PLAN HVAC

SHEET NUMBER

M2.21



1 SECOND FLOOR/ROOF PLAN - HVAC
 M2.22 scale: 1/8" = 1'-0"

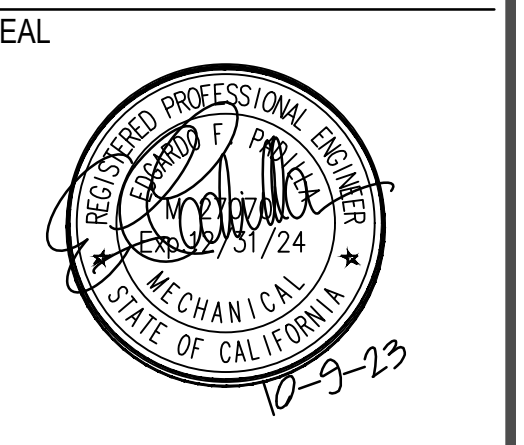
GENERAL NOTES:

- VERIFY EXISTING DUCTS, PIPING AND EQUIPMENT LOCATION PRIOR TO INSTALLATION OF NEW WORK. COORDINATE CLEARANCES AND ACCESS WITH ARCHITECTURAL DRAWINGS. REFERENCE TO DETAILS APPLIES TO ALL MECHANICAL WORK.
- REFER TO ALL DETAILS ON M3.01.
 - CONTRACTOR SHALL DETERMINE THE FINAL LOCATION OF THE FANS AND ROUTING OF DUCTWORK. LOCATE FANS TO CLEAR BUILDING STRUCTURE, EXISTING ELECTRICAL, PIPING AND OTHER OBSTRUCTIONS IN THE CEILING CAVITY. COORDINATE INSTALLATION WITH ARCHITECTURAL DRAWINGS. PROVIDE ADEQUATE ACCESS TO FILTERS MOTORS AND POWER DISCONNECT.

CONSTRUCTION KEYED NOTES:

- EXISTING AC UNIT, THERMOSTAT, BC CONTROLLER, FAN, DUCT, ROOM AIR TRANSFER DUCT AND REGISTERS, AND PIPING TO REMAIN.
- WORKSHOP ROOM 111: PROVIDE MECHANICAL VENTILATION. REMOVE AND DISPOSE EXISTING ROOF AIR INTAKE. EXISTING OUTSIDE AIR DUCT TO REMAIN. EXISTING ROOF CURB AND BACKDRAFT DAMPER TO REMAIN. PROVIDE NEW SUPPLY FAN SF-1 AND POWER AND POWER DISCONNECT. INSTALL NEW SUPPLY FAN ON THE EXISTING ROOF CURB. PROVIDE SHEET METAL CURB CAP FOR MOUNTING THE NEW FAN ON THE EXISTING ROOF CURB. REFER TO DETAIL 3.
- WORKSHOP ROOM 111: PROVIDE NEW SUPPLY AIR DIFFUSER. PROVIDE AIR TRANSFERS DUCT AND CEILING MOUNTED AIR REGISTERS BETWEEN WORKSHOP ROOM 111 AND ART SHOP ROOM 114. REFER TO M3.01 FOR AIR OUTLET SCHEDULED REQUIREMENTS. TEST, ADJUST AND BALANCE TO AIRFLOW INDICATED. SEE M2.21.
- ART SHOP ROOM 114: PROVIDE MECHANICAL VENTILATION. USE EXISTING EXHAUST ROOM VENTILATION EF-4. PROVIDE CONTROL INTERFACE WITH EXISTING OCCUPANCY SENSOR FOR LIGHTING. EF-4 SHALL BE ENABLED WHEN THE ROOM IS OCCUPIED. EF-4 EXISTING CONTROL FOR ROOM TEMPERATURE WITH LINE VOLTAGE THERMOSTAT SHALL REMAIN. MODIFIED FAN CONTROL CIRCUIT AS REQUIRED.
- KITCHEN EXHAUST FAN AND MAKE-UP AIR EVAPORATIVE COOLER EC-1 INTERLOCK: PROVIDE CONTROL INTERLOCK BETWEEN THE EXISTING MAKE-UP AIR UNIT EC-1 AND EXISTING KITCHEN HOOD EXHAUST FAN E-3 TO RUN SIMULTANEOUSLY. THE POWER SUPPLY FOR EC-1 IS 480V/3PH. THE POWER TO THE EXISTING KITCHEN EXHAUST FAN IS 208V/1PH. THE EXISTING KITCHEN EXHAUST FAN HAVE 2-SPEED MOTOR. THIS WORK SHALL BE PERFORMED BY STATE LICENSED ELETRICAL/CONTROL CONTRACTOR.
 - FIELD SURVEY TO VERIFY EXISTING EQUIPMENT POWER SUPPLY SOURCE, INTERLOCK WIRING CIRCUITS, ROUTING AND CONTROLS. THE EXISTING INTERLOCK CONTROL PANEL IS LOCATED ON THE ROOF ADJACENT TO THE EXISTING KITCHEN EXHAUST FAN ON THE ROOF. THE ON/OFF AND FAN SPEED SWITCHES ARE LOCATED IN THE KITCHEN NEAR THE KITCHEN EXHAUST HOOD. COORDINATE ALL WORK WITH CITY OF BERKELEY. REFER TO ORIGINAL DRAWING FOR THE EXISTING KITCHEN HOOD EXHAUST CONTROL SYSTEM FOR REFERENCE ONLY.
 - PROVIDE A DESIGN-BUILD CONTROLS FOR THE INTERLOCK BETWEEN THE EXISTING KITCHEN EXHAUST FAN E-3 AND THE EXISTING MAKE-UP AIR UNIT (EC-1). E-3 SHALL HAVE 2-SPEED FAN. RUN E-3 ON HIGH SPEED ONLY. PROVIDE INTERLOCK WITH THE EXISTING KITCHEN GREASE HOOD FIRE SUPPRESSION SYSTEM FOR SHUTDOWN OF BOTH EC-1 AND E-3 FANS. THE CONTROL INTERLOCK SHALL CONSIST OF HARDWIRED TRANSFORMER, RELAYS AND NEW NEMA3R CONTROL PANEL SIMILAR TO EXISTING CONTROL SYSTEM. PROVIDE NEW SYSTEM ON/OFF AT THE SAME LOCATION IN THE KITCHEN. VERIFY POINT OF CONNECTION AT EC-1 CONTROL PANEL WITH GREENHECK THE FAN MANUFACTURER. REFER TO SUBMITTAL FOR EC-1 PROVIDED WITH THE CONSTRUCTION DRAWINGS.
 - PROVIDE ETCH PLASTIC PERMANENT NAMEPLATES WITH 1/2" LETTERS ON CONTROL PANEL ON THE ROOF AND ON ON/OFF SWITCH IN THE KITCHEN. PROVIDE SUBMITTAL SHOP DRAWINGS, WIRING DIAGRAM, CUT SHEETS FOR RELAYS, ON/OFF SWITCH AND CONTROL PANEL REVIEW, COORDINATION AND APPROVAL. PRIOR TO PROCUREMENTS AND INSTALLATION.
 - ON/OFF SWITCH SHALL BE SIMILAR TO 'ALL POINTS' 42-1308 FAN SWITCH.
 - PERFORM TESTING, ADJUSTING AND BALANCING FOR E-3 FOR HIGH AND LOW SPEED AIRFLOW RATE AND FAN RPM. SET EC-1 CONSTANT AIRFLOW AIR 2500 CFM. ADJUST EC-1 AIRFLOW AT THE UNIT MOUNTED CONTROL PANEL.
 - PERFORM TESTING AND COMMISSIONING WITNESSED BY THE OWNER'S REPRESENTATIVE.
 - PROVIDE OPERATIONAL TRAINING FOR THE OWNER'S REPRESENTATIVE.
 - PROVIDE AS-BUILT DRAWINGS AND OPERATION AND MAINTENANCE MANUAL.
 - PROVIDE ONE (1) YEAR WARRANTEE.
 - CONTROL SEQUENCE OF OPERATION: NORMAL OPERATION - SET E-3 AT RUN AT 3000 CFM AT HIGH MOTOR SPEED. SET EC-1 AT 2500 CFM SINGLE SPEED SETTING.

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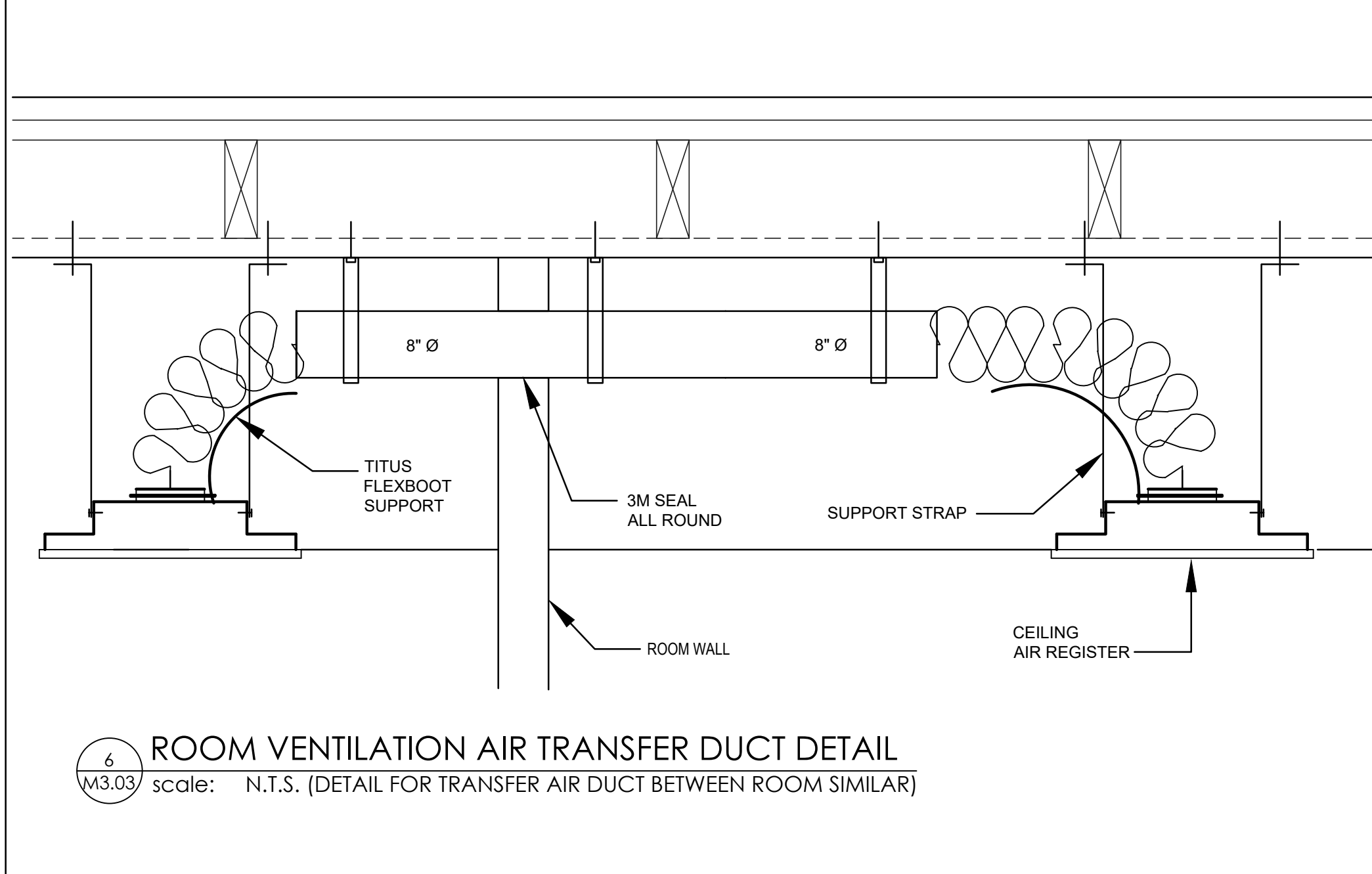
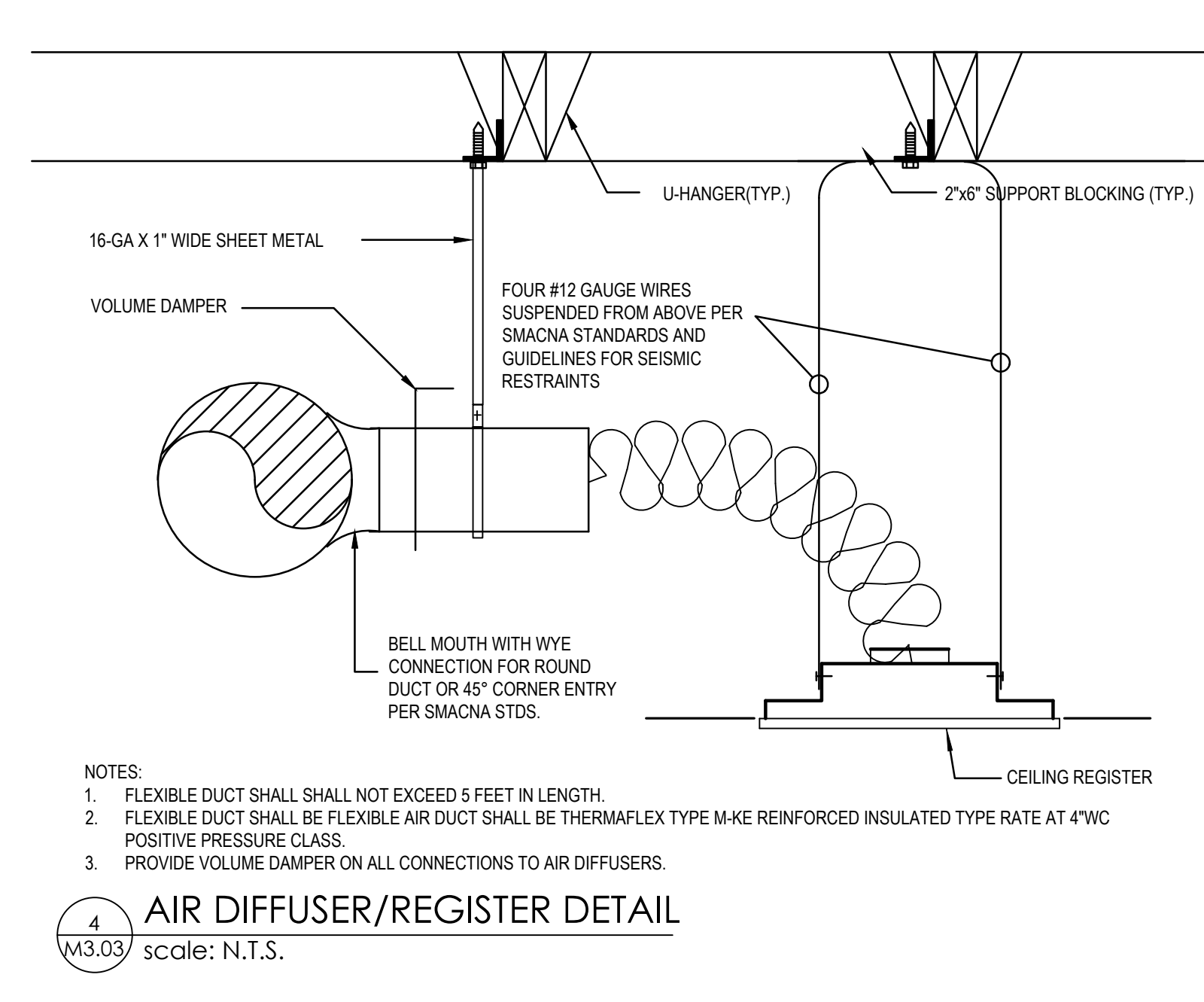
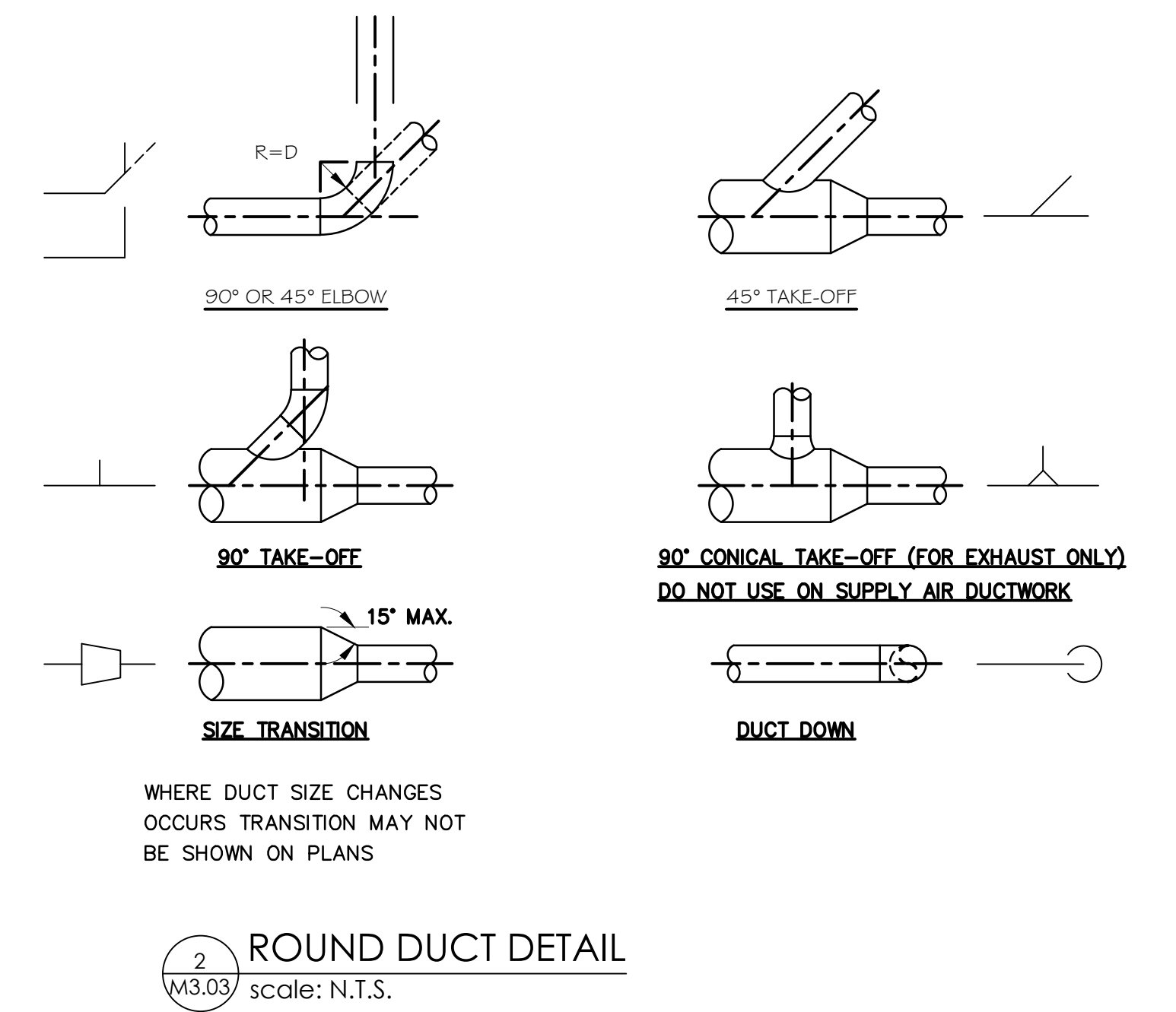
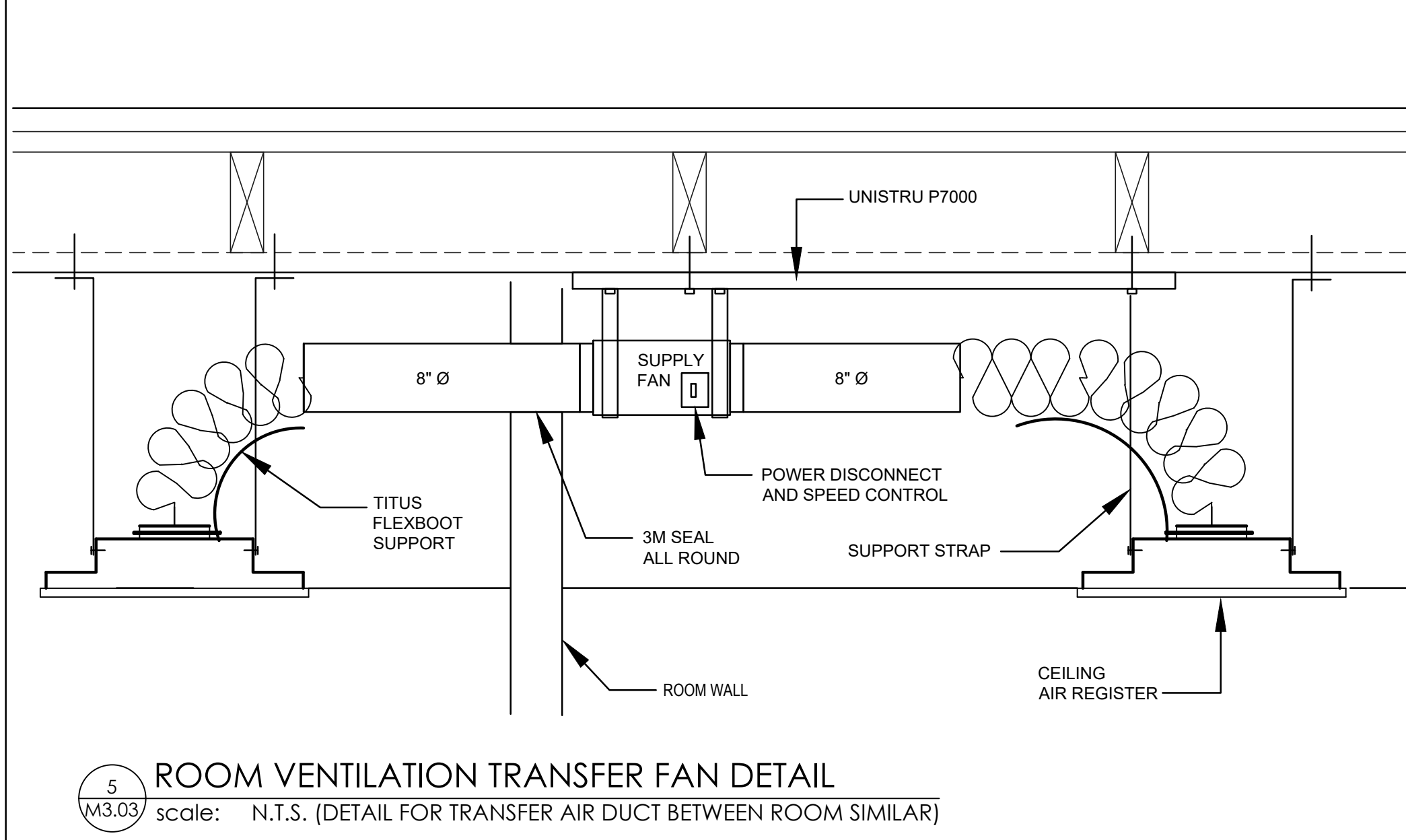
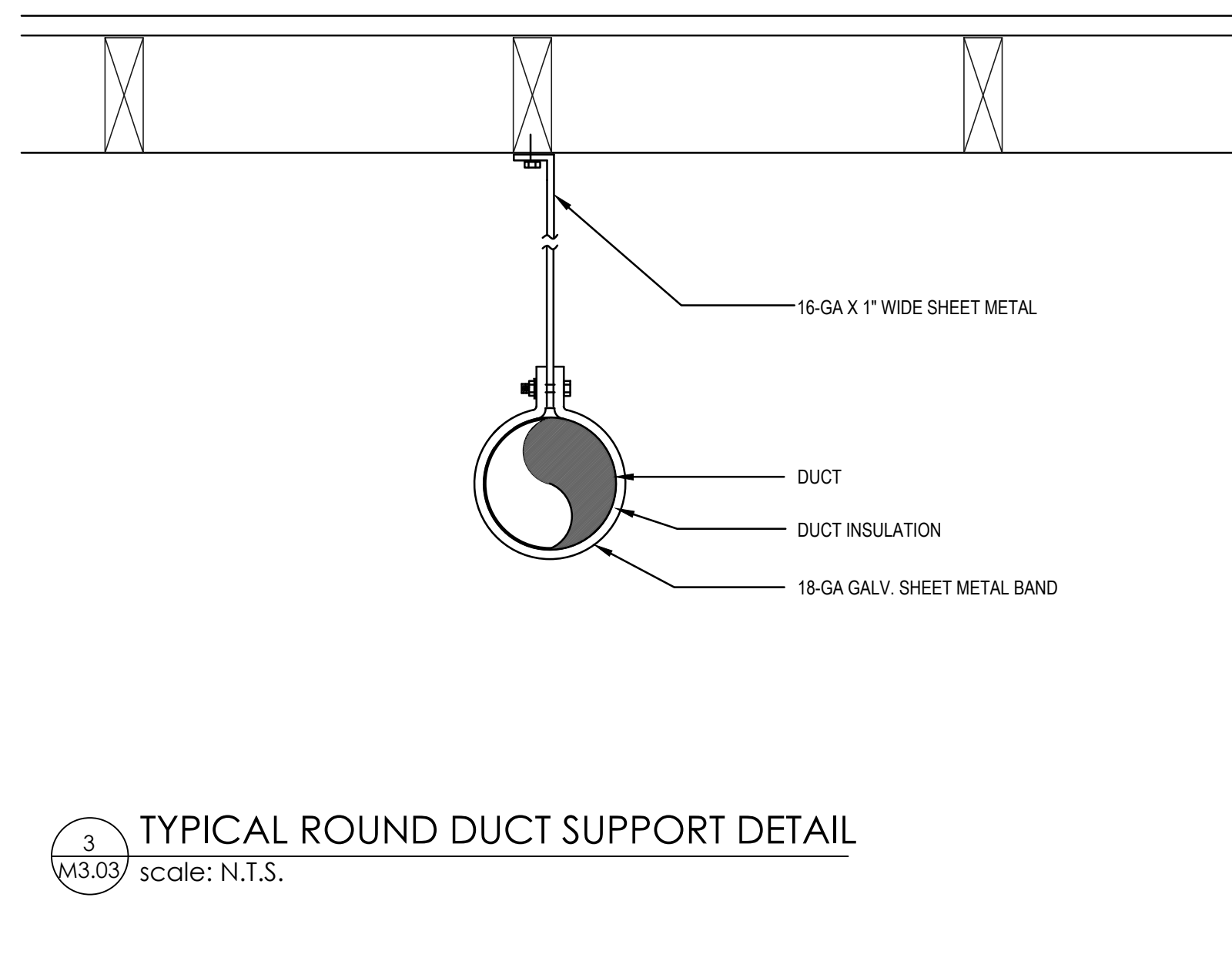
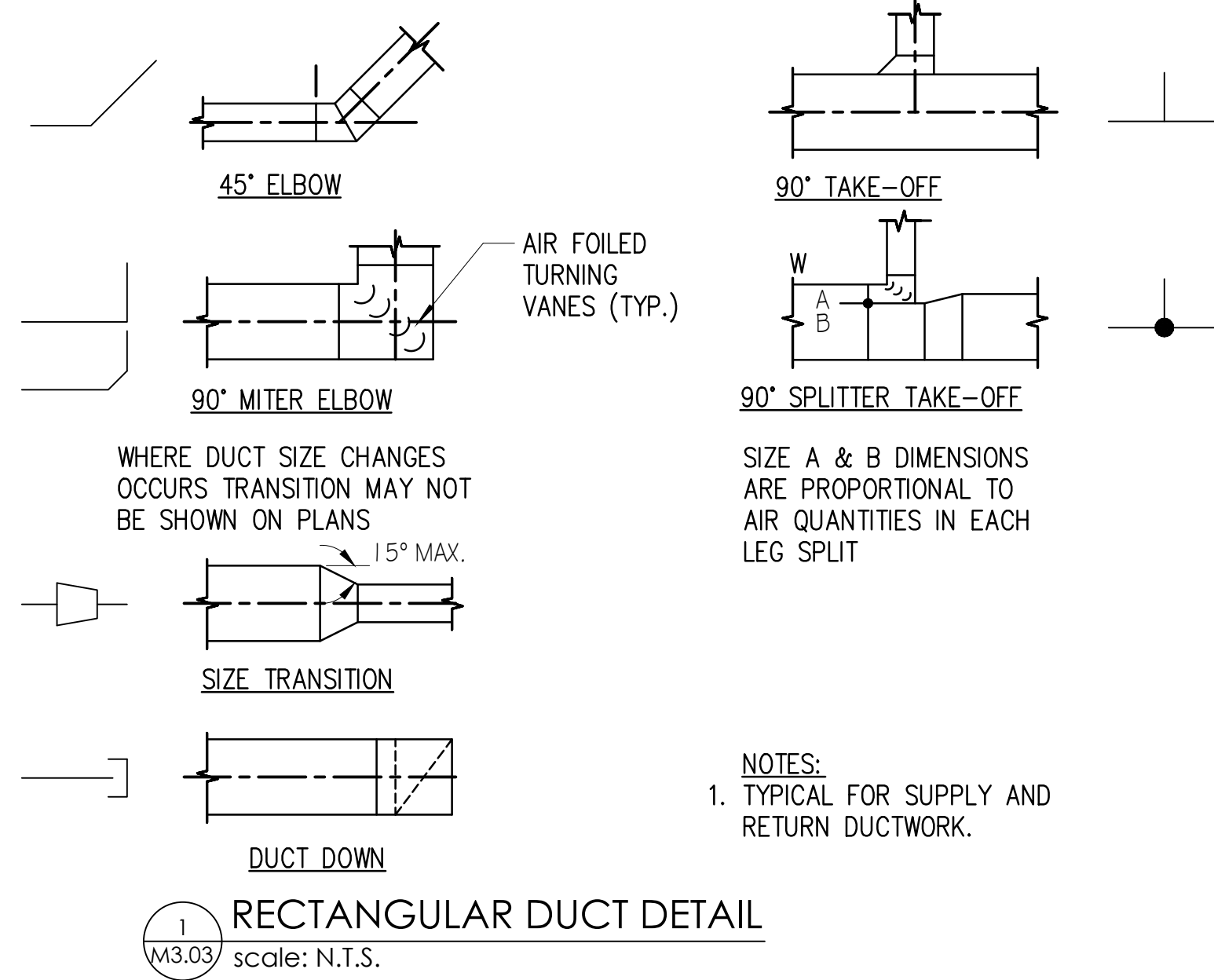
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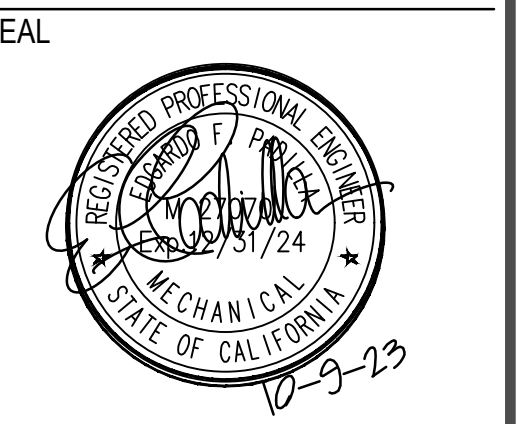
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NORTH BERKELEY SENIOR CENTER
ROOM MECHANICAL VENTILATION

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SHEET TITLE
HVAC DETAILS

SHEET NUMBER
M3.03

SPECIFICATIONS

HVAC SUPPLY FAN (SF-1)
 1.3 SUBMITTALS
 A. GENERAL: SUBMIT IN ACCORDANCE WITH SECTION 01 33 00 SUBMITTAL PROCEDURES
 B. PROVIDE DIMENSIONAL DRAWINGS AND PRODUCT DATA ON EACH FAN
 C. PROVIDE FAN CURVES FOR EACH FAN AT THE SPECIFIED OPERATION POINT, WITH THE FLOW, STATIC PRESSURE AND HORSEPOWER CLEARLY PLOTTED
 D. PROVIDE OUTLET VELOCITY AND FAN'S INLET SOUND POWER READINGS FOR THE EIGHT OCTAVE BANDS, DECIBELS, AND SONES
 E. STRICTLY ADHERE TO QUALITY ASSURANCE REQUIREMENTS AS STATED IN SECTION 1.04 OF THIS SPECIFICATION
 F. PROVIDE MANUFACTURER'S CERTIFICATION THAT FANS ARE LICENSED TO BEAR AIR MOVEMENT AND CONTROL ASSOCIATION (AMCA), CERTIFIED RATING SEAL FOR SOUND AND AIR PERFORMANCE
 G. INSTALLATION, OPERATION, AND MAINTENANCE MANUAL (OM): PROVIDE MANUFACTURER'S INSTALLATION, OPERATIONS, AND MAINTENANCE MANUAL, INCLUDING INSTRUCTIONS ON INSTALLATION, OPERATIONS, MAINTENANCE, PULLEY ADJUSTMENT, RECEIVING, HANDLING, STORAGE, SAFETY INFORMATION AND CLEANING, A TROUBLESHOOTING GUIDE, PARTS LIST, WARRANTY AND ELECTRICAL WIRING DIAGRAMS

1.4 QUALITY ASSURANCE
 A. PERFORMANCE RATINGS: CONFORM TO AMCA STANDARD 211 AND 311. FANS MUST BE TESTED IN ACCORDANCE WITH ANSI/AMCA STANDARD 210-99 AND AMCA STANDARD 300-96 IN AN AMCA ACCREDITED LABORATORY. FANS SHALL BE CERTIFIED TO BEAR THE AMCA LABEL FOR AIR AND SOUND PERFORMANCE SEAL
 B. EACH FAN SHALL BE GIVEN A BALANCING ANALYSIS WHICH IS APPLIED TO WHEELS AT THE OUTSIDE RADIUS. THE MAXIMUM ALLOWABLE STATIC AND DYNAMIC IMBALANCE IS 0.05 OUNCES (BALANCE GRADE OF G6.3)
 C. COMPLY WITH THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA), STANDARDS FOR MOTORS AND ELECTRICAL ACCESSORIES

1.5 WARRANTY
 A. MANUFACTURER'S WARRANTY: SUBMIT, FOR OWNER'S ACCEPTANCE, MANUFACTURER'S STANDARD WARRANTY DOCUMENT EXECUTED BY AUTHORIZED COMPANY OFFICIAL. MANUFACTURER'S WARRANTY IS IN ADDITION TO, AND NOT A LIMITATION OF, OTHER RIGHTS OWNER MAY HAVE UNDER CONTRACT DOCUMENTS
 1. THE WARRANTY OF THIS EQUIPMENT IS TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE PURCHASE DATE. ANY UNITS OR PARTS WHICH PROVE DEFECTIVE DURING THE WARRANTY PERIOD WILL BE REPLACED AT THE MANUFACTURERS OPTION WHEN RETURNED TO MANUFACTURER, TRANSPORTATION PREPAID
 2. MOTOR WARRANTY IS WARRANTED BY THE MOTOR MANUFACTURER FOR A PERIOD OF ONE YEAR. SHOULD MOTORS FURNISHED BY US PROVE DEFECTIVE DURING THIS PERIOD, THEY SHOULD BE RETURNED TO THE NEAREST AUTHORIZED MOTOR SERVICE STATION

1.6 MAINTENANCE
 A. REFER TO MANUFACTURER'S INSTALLATION, OPERATION AND MAINTENANCE MANUAL (IOM), TO FIND MAINTENANCE PROCEDURES

2.0 PRODUCTS MANUFACTURER:
 2.1 ROOF MOUNTED SUPPLY FAN (SF-1)- LOREN COOK
 A. GENERAL DESCRIPTION
 1. BASE FAN PERFORMANCE AT STANDARD CONDITIONS (DENSITY 0.075 LB/FT³)
 2. ROOF MOUNTED APPLICATIONS
 3. PERFORMANCE CAPABILITIES SHALL BE AS INDICATED ON THE FAN SCHEDULE.
 4. MAXIMUM OPERATING TEMPERATURES IS 120 FAHRENHEIT.
 5. SOUND LEVELS AS INDICATED.
 6. FANS ARE UL/CUL LISTED 507 - ELECTRIC FANS
 7. EACH FAN SHALL BEAR A PERMANENTLY AFFIXED MANUFACTURER'S NAMEPLATE CONTAINING THE MODEL NUMBER AND INDIVIDUAL SERIAL NUMBER
 B. WHEEL:
 1. FORWARD OR BACKWARD INCLINED CURVED CENTRIFUGAL WHEEL, ENCLOSED GREASEABLE SELF-ALIGNING BALL BEARINGS ACCESSIBLE FOR MAINTENANCE AND LUBRICATION.
 2. CONSTRUCTED OF GALVANIZED STEEL OR CALCIUM CARBONATE FILLED POLYPROPYLENE
 3. STATICALLY AND DYNAMICALLY BALANCED IN ACCORDANCE TO AMCA STANDARD 204-05
 C. MOTORS:
 1. ECM MOTOR TYPE, MOTOR ENCLOSURES SHALL BE OPEN DRIPPROOF (ODP), OPENING IN THE FRAME BODY AND OR END BRACKETS
 2. MOTORS ARE PERMANENTLY LUBRICATED SLEEVE BEARING TYPE TO MATCH WITH THE FAN LOAD AND FURNISHED AT THE SPECIFIC VOLTAGE AND PHASE
 3. MOTOR SHALL BE MOUNTED ON VIBRATION ISOLATORS AND BE ACCESSIBLE FOR MAINTENANCE
 4. MOTOR SHALL ECM MOTOR WITH ON-BOARD SPEED CONTROLS.
 5. THERMAL OVERLOAD PROTECTION
 D. HOUSING:
 1. CONSTRUCTED OF HEAVY GAUGE GALVANIZED STEEL
 2. INTERIOR SHALL BE LINED WITH 0.5 INCHES OF ACOUSTICAL INSULATION
 3. PROFILE AS LOW AS 10 1/8 INCHES
 E. OUTLET:ROOF CURB MOUNTING.
 F. FILTERS: WASHABLE 30-30% EFFICIENT (ASHRAE) FILTERS WITH EXPANDED ALUMINUM REMOVABLE SCREEN.
 G. EXTERNAL ELECTRICAL ACCESS: ELIMINATES REMOVING THE MOTOR PACK WHICH SAVES TIME ON INSTALLATION
 H. MOUNTING: PROVIDE CURB MOUNTING CAP.
 I. ACCESS PANEL: ONCE INSTALLED SHALL HAVE EASY ACCESS TO INTERNAL COMPONENTS
 J. ACCESSORIES SHALL INCLUDE:
 1. DISCONNECT SWITCHES:
 a. NEMA RATED:30
 b. POSITIVE ELECTRICAL SHUT-OFF
 c. WIRED FROM FAN MOTOR TO JUNCTION BOX INSTALLED WITHIN MOTOR COMPARTMENT
 d. ACCESS FOR WIRING SHALL BE EXTERNAL
 K. FAN SPEED CONTROLS: ECM MOTOR WITH ON BOARD ADJUSTMENT.

3.0 EXECUTION
 3.1 MANUFACTURER'S INSTRUCTIONS
 A. COMPLIANCE: COMPLY WITH MANUFACTURER'S PRODUCT DATA, INCLUDING TECHNICAL BULLETINS, PRODUCT CATALOG INSTALLATION INSTRUCTIONS AND MAINTENANCE OF FANS. DO NOT PROCEED WITH INSTALLATION UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED

3.2 EXAMINATION
 A. EXAMINE AREAS TO RECEIVE FANS. NOTIFY THE ENGINEER OF CONDITIONS THAT WOULD ADVERSELY AFFECT INSTALLATION OR SUBSEQUENT UTILIZATION AND MAINTENANCE OF FANS. DO NOT PROCEED WITH INSTALLATION UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED

3.3 PREPARATION
 A. ENSURE ROOF OPENINGS ARE SQUARE, ACCURATELY ALIGNED, CORRECTLY LOCATED, AND IN TOLERANCE
 B. ENSURE DUCT IS PLUMB, SIZED CORRECTLY, AND TO PROPER ELEVATION ABOVE ROOF DECK. INSTALL DUCT AS SPECIFIED IN AIR DISTRIBUTION (DIVISION 23)

3.4 INSTALLATION
 A. INSTALL FANS SYSTEM AS INDICATED ON THE INSTALLATION, OPERATION AND MAINTENANCE MANUAL (IOM) AND CONTRACT DRAWINGS
 B. INSTALL FANS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS

3.5 SYSTEM STARTUP: REFER TO INSTALLATION, OPERATION, AND MAINTENANCE MANUAL (IOM)

3.6 ADJUSTING
 A. ADJUST FANS TO FUNCTION PROPERLY
 B. ADJUST BELT TENSION
 C. LUBRICATE BEARINGS
 D. ADJUST DRIVE FOR FINAL SYSTEM BALANCING
 E. CHECK WHEEL OVERLAP

3.7 CLEANING
 A. CLEAN AS RECOMMENDED BY MANUFACTURER. DO NOT USE MATERIAL OR METHODS WHICH MAY DAMAGE FINISH SURFACE OR SURROUNDING CONSTRUCTION

3.8 PROTECTION
 A. PROTECT INSTALLED PRODUCT AND FINISHED SURFACES FROM DAMAGE DURING CONSTRUCTION
 B. PROTECT INSTALLED EXHAUST FANS TO ENSURE THAT, EXCEPT FOR NORMAL WEATHERING, FANS WILL BE WITHOUT DAMAGE OR DETERIORATION AT TIME OF SUBSTANTIAL COMPLETION.

HVAC SUPPLY FAN (SF-2 AND SF-3)
 1.3 SUBMITTALS
 A. GENERAL: SUBMIT IN ACCORDANCE WITH SECTION 01 33 00 SUBMITTAL PROCEDURES
 B. PROVIDE DIMENSIONAL DRAWINGS AND PRODUCT DATA ON EACH FAN
 C. PROVIDE FAN CURVES FOR EACH FAN AT THE SPECIFIED OPERATION POINT, WITH THE FLOW, STATIC PRESSURE AND HORSEPOWER CLEARLY PLOTTED
 D. PROVIDE OUTLET VELOCITY AND FAN'S INLET SOUND POWER READINGS FOR THE EIGHT OCTAVE BANDS, DECIBELS, AND SONES
 E. STRICTLY ADHERE TO QUALITY ASSURANCE REQUIREMENTS AS STATED IN SECTION 1.04 OF THIS SPECIFICATION
 F. PROVIDE MANUFACTURER'S CERTIFICATION THAT FANS ARE LICENSED TO BEAR AIR MOVEMENT AND CONTROL ASSOCIATION (AMCA), CERTIFIED RATING SEAL FOR SOUND AND AIR PERFORMANCE
 G. INSTALLATION, OPERATION, AND MAINTENANCE MANUAL (OM): PROVIDE MANUFACTURER'S INSTALLATION, OPERATIONS, AND MAINTENANCE MANUAL, INCLUDING INSTRUCTIONS ON INSTALLATION, OPERATIONS, MAINTENANCE, PULLEY ADJUSTMENT, RECEIVING, HANDLING, STORAGE, SAFETY INFORMATION AND CLEANING, A TROUBLESHOOTING GUIDE, PARTS LIST, WARRANTY AND ELECTRICAL WIRING DIAGRAMS

1.4 QUALITY ASSURANCE
 A. PERFORMANCE RATINGS: CONFORM TO AMCA STANDARD 211 AND 311. FANS MUST BE TESTED IN ACCORDANCE WITH ANSI/AMCA STANDARD 210-99 AND AMCA STANDARD 300-96 IN AN AMCA ACCREDITED LABORATORY. FANS SHALL BE CERTIFIED TO BEAR THE AMCA LABEL FOR AIR AND SOUND PERFORMANCE SEAL
 B. EACH FAN SHALL BE GIVEN A BALANCING ANALYSIS WHICH IS APPLIED TO WHEELS AT THE OUTSIDE RADIUS. THE MAXIMUM ALLOWABLE STATIC AND DYNAMIC IMBALANCE IS 0.05 OUNCES (BALANCE GRADE OF G6.3)
 C. COMPLY WITH THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA), STANDARDS FOR MOTORS AND ELECTRICAL ACCESSORIES

1.5 WARRANTY
 A. MANUFACTURER'S WARRANTY: SUBMIT, FOR OWNER'S ACCEPTANCE, MANUFACTURER'S STANDARD WARRANTY DOCUMENT EXECUTED BY AUTHORIZED COMPANY OFFICIAL. MANUFACTURER'S WARRANTY IS IN ADDITION TO, AND NOT A LIMITATION OF, OTHER RIGHTS OWNER MAY HAVE UNDER CONTRACT DOCUMENTS
 1. THE WARRANTY OF THIS EQUIPMENT IS TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE PURCHASE DATE. ANY UNITS OR PARTS WHICH PROVE DEFECTIVE DURING THE WARRANTY PERIOD WILL BE REPLACED AT THE MANUFACTURERS OPTION WHEN RETURNED TO MANUFACTURER, TRANSPORTATION PREPAID
 2. MOTOR WARRANTY IS WARRANTED BY THE MOTOR MANUFACTURER FOR A PERIOD OF ONE YEAR. SHOULD MOTORS FURNISHED BY US PROVE DEFECTIVE DURING THIS PERIOD, THEY SHOULD BE RETURNED TO THE NEAREST AUTHORIZED MOTOR SERVICE STATION

1.6 MAINTENANCE
 A. REFER TO MANUFACTURER'S INSTALLATION, OPERATION AND MAINTENANCE MANUAL (IOM), TO FIND MAINTENANCE PROCEDURES

2.0 PRODUCTS MANUFACTURER:
 2.1 INLINE CONCEALED CEILING MOUNTED SUPPLY FANS (SF-2 AND SF-3)- PANASONIC WHISPER
 A. GENERAL DESCRIPTION
 1. BASE FAN PERFORMANCE AT STANDARD CONDITIONS (DENSITY 0.075 LB/FT³)
 2. PERFORMANCE CAPABILITIES SHALL BE AS INDICATED ON THE FAN SCHEDULE.
 3. MAXIMUM OPERATING TEMPERATURES IS 140 FAHRENHEIT.
 4. SOUND LEVELS AS LOW AS NOTED.
 5. FANS ARE UL/CUL LISTED 507 - ELECTRIC FANS
 6. EACH FAN SHALL BEAR A PERMANENTLY AFFIXED MANUFACTURER'S NAMEPLATE CONTAINING THE MODEL NUMBER AND INDIVIDUAL SERIAL NUMBER
 B. WHEEL:
 1. CONSTRUCTED OF GALVANIZED STEEL
 2. STATICALLY AND DYNAMICALLY BALANCED IN ACCORDANCE TO AMCA STANDARD 204-05
 C. MOTORS:
 1. MANUALLY ADJUSTABLE MULTI-SPEED FOUR POLE TOTALLY ENCLOSED CONDENSER MOTOR.
 2. MOTOR SHALL BE MOUNTED ON VIBRATION ISOLATORS AND BE ACCESSIBLE FOR MAINTENANCE
 3. MOTOR SHALL ECM MOTOR WITH ON-BOARD SPEED CONTROLS.
 4. THERMAL OVERLOAD PROTECTION
 D. HOUSING:
 1. CONSTRUCTED OF GALVANIZED STEEL
 2. EXTERIOR SHALL BE HAVE ACOUSTICAL INSULATION.
 3. EXTERNAL ELECTRICAL ACCESS: ELIMINATES REMOVING THE MOTOR PACK WHICH SAVES TIME ON INSTALLATION
 H. MOUNTING: CONCEALED CEILING.
 I. ACCESSORIES SHALL INCLUDE:
 1. DISCONNECT SWITCHES:
 a. NEMA RATED:1
 b. POSITIVE ELECTRICAL SHUT-OFF
 c. WIRED FROM FAN MOTOR TO JUNCTION BOX INSTALLED WITHIN MOTOR COMPARTMENT
 d. ACCESS FOR WIRING SHALL BE EXTERNAL
 K. FAN SPEED CONTROLS: MANUALLY ADJUSTABLE 50-60-70-80-90-100-110-120-130-140-150 CFM.

3.0 EXECUTION
 3.1 MANUFACTURER'S INSTRUCTIONS
 A. COMPLIANCE: COMPLY WITH MANUFACTURER'S PRODUCT DATA, INCLUDING TECHNICAL BULLETINS, PRODUCT CATALOG INSTALLATION INSTRUCTIONS AND MAINTENANCE OF FANS. DO NOT PROCEED WITH INSTALLATION UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED

3.2 EXAMINATION
 A. EXAMINE AREAS TO RECEIVE FANS. NOTIFY THE ENGINEER OF CONDITIONS THAT WOULD ADVERSELY AFFECT INSTALLATION OR SUBSEQUENT UTILIZATION AND MAINTENANCE OF FANS. DO NOT PROCEED WITH INSTALLATION UNTIL UNSATISFACTORY CONDITIONS ARE CORRECTED

3.3 PREPARATION: ENSURE DUCT IS PLUMB, SIZED CORRECTLY, AND TO PROPER ELEVATION ABOVE ROOF DECK. INSTALL DUCT AS SPECIFIED IN AIR DISTRIBUTION.

3.4 INSTALLATION
 A. INSTALL FANS SYSTEM AS INDICATED ON THE INSTALLATION, OPERATION AND MAINTENANCE MANUAL (IOM) AND CONTRACT DRAWINGS
 B. INSTALL FANS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS

3.5 SYSTEM STARTUP: REFER TO INSTALLATION, OPERATION, AND MAINTENANCE MANUAL (IOM)

3.6 ADJUSTING
 A. ADJUST FANS TO FUNCTION PROPERLY
 B. LUBRICATE BEARINGS
 C. ADJUST DRIVE FOR FINAL SYSTEM BALANCING
 D. CHECK WHEEL OVERLAP

3.7 CLEANING
 A. CLEAN AS RECOMMENDED BY MANUFACTURER. DO NOT USE MATERIAL OR METHODS WHICH MAY DAMAGE FINISH SURFACE OR SURROUNDING CONSTRUCTION

3.8 PROTECTION
 A. PROTECT INSTALLED PRODUCT AND FINISHED SURFACES FROM DAMAGE DURING CONSTRUCTION
 B. PROTECT INSTALLED EXHAUST FANS TO ENSURE THAT, EXCEPT FOR NORMAL WEATHERING, FANS WILL BE WITHOUT DAMAGE OR DETERIORATION AT TIME OF SUBSTANTIAL COMPLETION.

TESTING, ADJUSTING AND BALANCING

THE TAB CONTRACTOR SHALL PROVIDE LABOR, INSTRUMENTS AND MATERIALS NECESSARY TO COMPLETELY TEST, ADJUST AND BALANCE HVAC SYSTEMS AND EQUIPMENT INSTALLED UNDER THIS CONTRACT.

1. REFERENCES:
 A. AABC MN-1-NATIONAL STANDARD FOR TESTING AND BALANCING HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS; 1989.
 B. ASHRAE 111 - PRACTICES FOR MEASUREMENT, TESTING, ADJUSTING AND BALANCING OF BUILDING HEATING, VENTILATION, AIR-CONDITIONING AND REFRIGERATION SYSTEMS; 1986.
2. SUBMITTALS
 A. FIELD REPORTS: INDICATE DEFICIENCIES, RECOMMEND IN SYSTEMS THAT WOULD PREVENT PROPER TESTING, ADJUSTING AND BALANCING OF SYSTEMS.
 B. PRIOR TO COMMENCING WORK, SUBMIT REPORT FORMS OR OUTLINES INDICATING ADJUSTING, BALANCING AND EQUIPMENT DATA REQUIRED.
 C. PROVIDE REPORTS IN LETTER SIZE, MANUAL IN PDF, COMPLETE WITH INDEX PAGE AND INDEXING TABS WITH COVER IDENTIFICATION AT FRONT AND SIDE. INCLUDE SET OF REDUCED DRAWINGS WITH AIR OUTLETS AND EQUIPMENT IDENTIFIED TO CORRESPOND WITH DATA SHEETS. TEST REPORTS: INDICATE DATA ON AABC MN-1 FORMS, FORMS PREPARED FOLLOWING ASHRAE 111, OR FORMS CONTAINING INFORMATION INDICATED IN SCHEDULES.
 D. INCLUDE THE FOLLOWING ON THE TITLE PAGE OF EACH REPORT.
 a. NAME OF TESTING, ADJUSTING AND BALANCING AGENCY.
 b. ADDRESS OF TESTING, ADJUSTING AND BALANCING AGENCY.
 c. TELEPHONE NUMBER OF TESTING, ADJUSTING AND BALANCING AGENCY.
 d. PROJECT NAME.
 e. PROJECT LOCATION.
 f. PROJECT OWNER'S REPRESENTATIVE.
 g. PROJECT ENGINEER.
 h. PROJECT CONTRACTOR.
 i. REPORT DATE.
3. QUALITY ASSURANCE
 A. TESTING AND BALANCING AGENCY SHALL BE A MEMBER OF AABC WITH A MINIMUM OF TEN (10) YEARS OF DOCUMENTED EXPERIENCE.
 B. AN AABC CERTIFIED TESTING AND BALANCE ENGINEER (TBE) SHALL BE RESPONSIBLE FOR CERTIFICATION OF THE TOTAL WORK OF THIS SECTION.
4. SYSTEM DESCRIPTION
 A. THIS PROJECT REQUIRES THE BALANCING OF NEW FANS AND ASSOCIATED AIR REGISTERS. PROVIDE THE SERVICES OF AN INDEPENDENT TEST AND BALANCE FIRM THAT SPECIALIZES IN TESTING AND BALANCING OF HVAC SYSTEMS. THE FOLLOWING SERVICES SHALL BE PROVIDED:
 a. PERFORM AIR SYSTEM TESTING, ADJUSTING AND BALANCING FOR THE AIR DISTRIBUTION DUCTWORK AND AIR REGISTERS.
 b. PERFORM FUNCTIONAL TESTING FOR THE SUPPLY FANS TO PROVIDE REQUIRED AIRFLOW TO EACH AIR REGISTERS, STATIC PRESSURE FAN FULL AMP READING, VOLTAGE AND NOISE.
6. NOTIFICATION AND SCHEDULING
 A. THE SCHEDULE FOR TESTING AND BALANCING THE HVAC SYSTEM SHALL BE ESTABLISHED BY THE OWNER IN COORDINATION WITH THE TESTING AND BALANCING AGENCY, AND APPROVED BY THE OWNER'S REPRESENTATIVE.
 B. THE TESTING AND BALANCING AGENCY IS RESPONSIBLE FOR INITIATING THIS CONTINUING COORDINATION TO DETERMINE SCHEDULE FOR FINAL TESTING AND BALANCING SERVICES.
 C. BEFORE TESTING AND BALANCING COMMENCES, THE TESTING AND BALANCING AGENCY SHALL RECEIVE NOTIFICATION, IN WRITING, FROM THE OWNER THAT THE SYSTEM IS OPERATIONAL, COMPLETE, AND READY FOR BALANCING.
7. GENERAL
 A. THE TAB CONTRACTOR SHALL PROVIDE ALL TESTING INSTRUMENTS USED FOR BALANCING AIR SYSTEMS. TESTING INSTRUMENTS SHALL HAVE BEEN CALIBRATED WITHIN A PERIOD OF SIX (6) MONTHS PRIOR TO BALANCING. TYPES, SERIAL NUMBERS AND DATES OF CALIBRATION OF ALL INSTRUMENTS SHALL BE LISTED IN THE FINAL AIR BALANCE REPORTS HEREIN SPECIFIED.
 B. IN THE EVENT IT BECOMES NECESSARY FOR THE OWNER TO BALANCE THE HVAC SYSTEMS CORRECTLY, AFTER THE BALANCING IS COMPLETE, THE COST OF THIS WORK WILL BE BACK CHARGED TO THE TAB CONTRACTOR.
8. THE TAB CONTRACTOR SHALL PREPARE SCHEMATIC DIAGRAMMATIC DRAWINGS FOR THE FOLLOWING:
 A. FANS AND AIR DISTRIBUTION DUCTWORK AND AIR REGISTERS.
 B. THE DRAWINGS WILL BE 1-LINE AIRFLOW SCHEMATICS. THE DRAWINGS SHALL INDICATE THE AIR QUANTITIES MEASURED AT AIR OUTLETS, INLETS, AND TEMPERATURE SETPOINT.
 C. IN ADDITION TO THE DUCT SCHEMATIC DRAWINGS, THE TAB CONTRACTOR SHALL PREPARE INDIVIDUAL SCHEMATIC DRAWINGS FOR EACH AIR-HANDLING UNIT OR EXHAUST FAN INDICATING THE UNIT CFM, TOTAL PRESSURE DROP, BHP, MOTOR FLA, RPM.
 D. THE DRAWINGS SHALL BE PRODUCED ON AUTOCAD RELEASE 2010 (OR HIGHER), AND A DISC AND ONE (1) SET OF REPRODUCIBLE VELLUMS SHALL BE SUBMITTED TO THE OWNER THROUGH THE ARCHITECT, FOR HIS USE. ALL COSTS ASSOCIATED WITH THE PRODUCTION OF THE DOCUMENTS SHALL BE INCLUDED UNDER THE BALANCING CONTRACTOR'S CONTRACT.

NOLL & TAM ARCHITECTS

729 Heinz Avenue
 Berkeley, CA 94710
 tel 510.542.2200
 fax 510.542.2201

SEAL



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 274 Devonshire Street
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APPROVALS

CITY OF BERKELEY NORTH BERKELEY SENIOR CENTER ROOM MECHANICAL VENTILATION

1901 HEARST ST.
 BERKELEY CA 94704

BID SET

ISSUE DATE **03/15/2024**

N&T JOB # **21603.00**

REVISIONS	DATE	DESCRIPTION

SHEET TITLE

SPECIFICATIONS

SHEET NUMBER

M4.02



Printed Date: 12/16/2019
 Job: Berkeley Senior Center
 Mark: EC-1
 Model: MSX-112-H22

CONSTRUCTION FEATURES AND ACCESSORIES

Unit	Accessories
Unit Installation - Outdoor	Std
Unit Construction - Double Wall	X
Wall Insulation - 1in. fiberglass - Heat source on	X
Base Insulation - 1in. fiberglass - entire unit base pan	Std
Paneled Bottom - Sheet metal liner for base insulation	X
Corrosion Resistant Fasteners	Std
Access and Connections - Right side when facing intake	X
Service Access - Removable lift off panels	X
Unit Finish - HI-Pro Polyester ASTM B117 salt spray 5000 hours	X
Finish Color - Concrete Gray (RAL 7023)	X
Supply Fan - Belt-drive, forward-curved	X
Supply Fan and Motor Vibration Isolation - Neoprene	X
Controls	
Unit Controls - Microprocessor	X
Remote Panel	X
BMS Communication - Monitoring and control	X
BMS Protocol - BACnet IP	X
Temperature Control - Discharge control	X
Supply Fan VFD - VFD by factory	X
Supply Fan Control - External 0-10 VDC signal	X
Unoccupied Mode (Night Setback)	X
Control Accessories	
Remote display	X
Heating Inlet Air Sensor	X
Cooling Inlet Air Sensor	X
Dirty Filter Switch	X
Fire Stat Type III (Ships loose)	X
120V/24V Smoke Detector (Ships loose)	X
Inlet Damper End Switch	X
External Cooling Lockout Relay	X
Freeze Protection (Supply Air Low Limit)	X
Auxiliary Supply Starter Contacts	X
Auxiliary Exhaust Starter Contacts	X
Heating Coil Freeze Protection	X
Airflow Proving Monitoring Contact	X

Standard Option Std
 Not Included X

Notes
 Damper(s) supplied are low leakage, motorized VCD-23 (leakage rate of 3 CFM/ft² @ 1 in.wg), Class 1A



Printed Date: 12/16/2019
 Job: Berkeley Senior Center
 Mark: EC-1
 Model: MSX-112-H22

**MSX-112-H22
 Unit Performance**

Design Conditions						
Elevation (ft)	Summer		Winter (°F)	Supply (CFM)	Outdoor Air (CFM)	Min Supply Airflow (CFM)
	DB (°F)	WB (°F)				
20	95.0	62.0	34.0	3,000	3,000	1,500

Unit Specifications				
Qty	Weight (lb)	Cooling Type	Heating Type	Unit Installation
1	1,321 (+/- 5%)	Direct Evaporative	Electric	Outdoor/Indoor

Configuration				
Unit Orientation	Unit Configuration	Outdoor Air Intake	Return Air Intake	Supply Air Discharge
Horizontal	Variable Volume	End	-	End

Cooling Specifications					
Type	Cooling Media	Media Depth (in.)	Required Flow (GPM)	Performance (DB/WB)	
				EAT (°F)	LAT (°F)
Direct Evaporative	CELdek	12	0.3	95.0 / 62.0	64.9 / 62.0

Heating Specifications					
Type	Capacity (kW)	Temperature Rise (°F)	Capacity Control	Performance	
				EAT (°F)	LAT (°F)
Electric	30.0	31.6	Modulating (SCR)	34.0	65.6

Air Performance									
Type	Total Volume (CFM)	External SP (in. wg)	Total SP (in. wg)	RPM	Operating Power (hp)	Qty	Type	Size (in.)	Drive-Type
Supply	3,000	0.25	0.621	747	0.87	1	Forward Curve	12	Belt-Drive

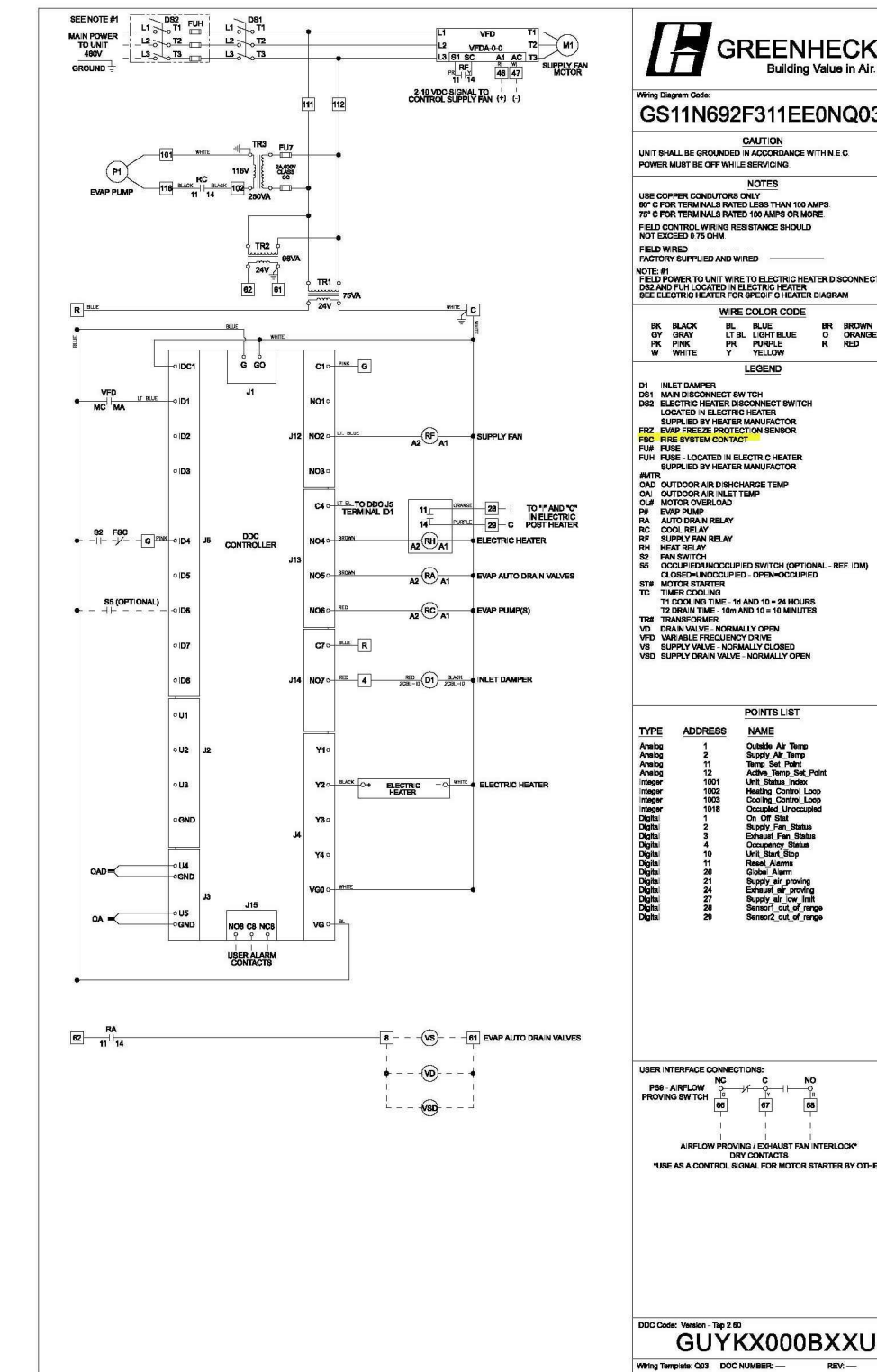
Motor Specifications					
Motor	Qty	Size (HP)	Enclosure	Efficiency	RPM
Supply Fan Motor	1	3	ODP	NEMA Premium	1725

Electrical Specifications			
Power Supply	Rating (V/CP)	MCA (A)	MOP (A)
Unit	460/60/3	53.3	60



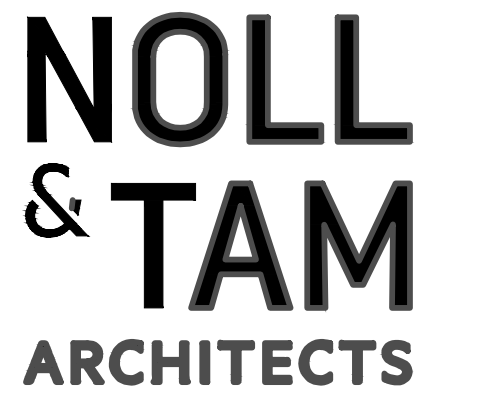
Printed Date: 12/16/2019
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Wiring Diagram



KITCHEN MAKEUP AIR UNIT EC-1 FOR REFERENCE

NOTE: REFER TO WIRING DIAGRAM FOR INTERLOCK CONNECTIONS. VERIFY WORK WITH GREENHECK TECHNICAL SUPPORT.



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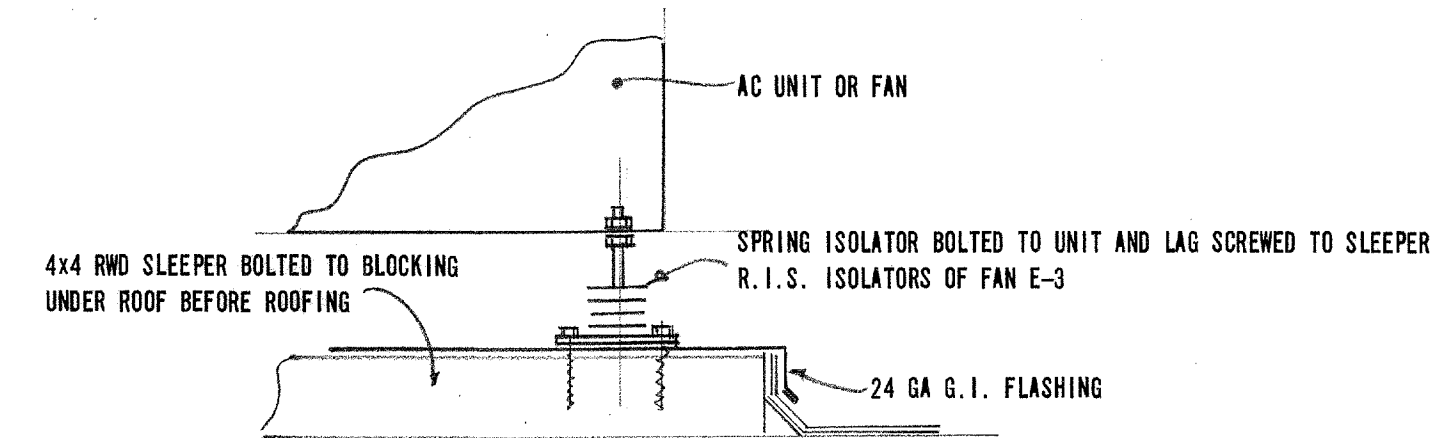
N&T JOB # **21603.00**

REVISIONS	DATE	DESCRIPTION

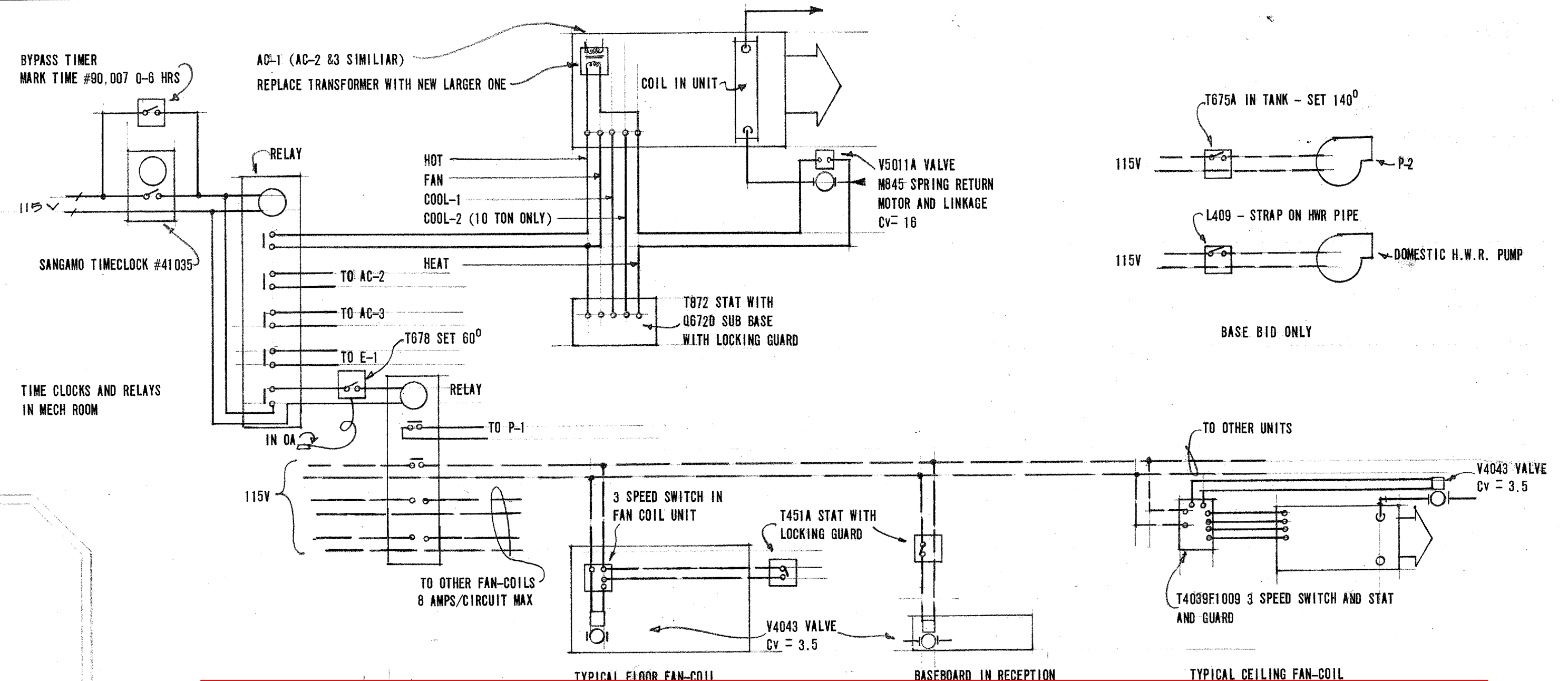
SHEET TITLE
KITCHEN MAKEUP AIR UNIT EC-1 DATA SHEETS

SHEET NUMBER

M4.03

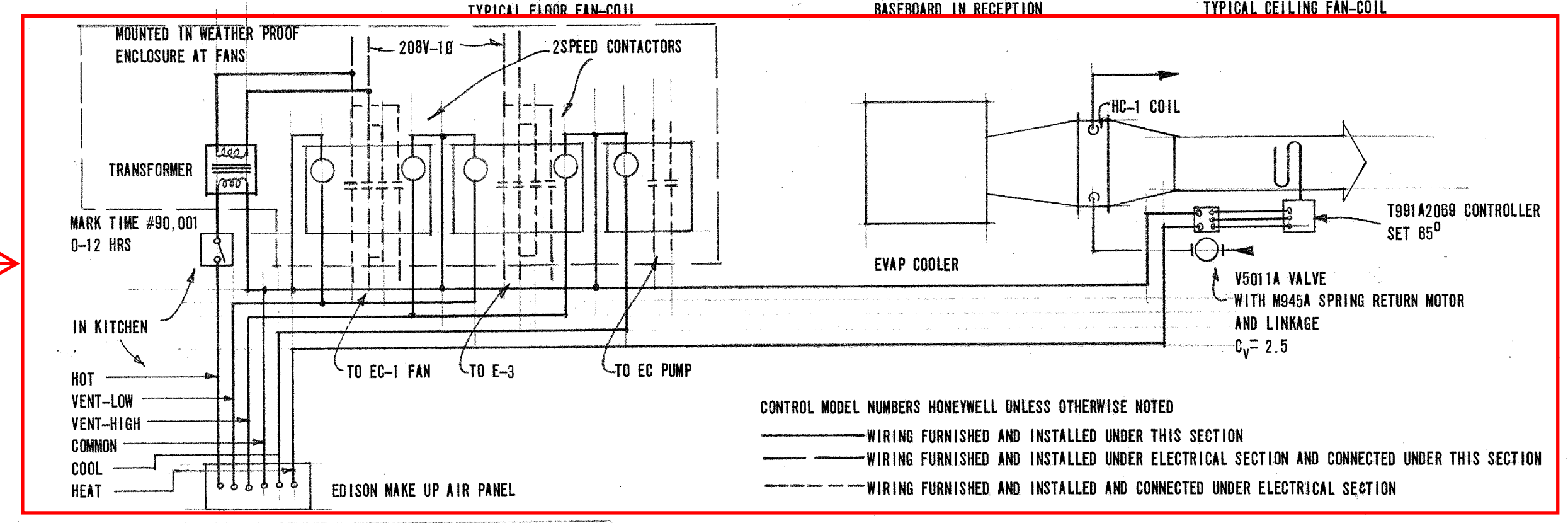


TYPICAL ROOF MOUNTING DETAIL ④



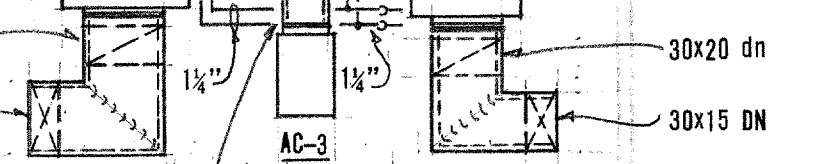
TEMPERATURE CONTROL AND INTERLOCK WIRING ③

EXISTING KITCHEN HOOD/VENTILATION CONTROL SYSTEM

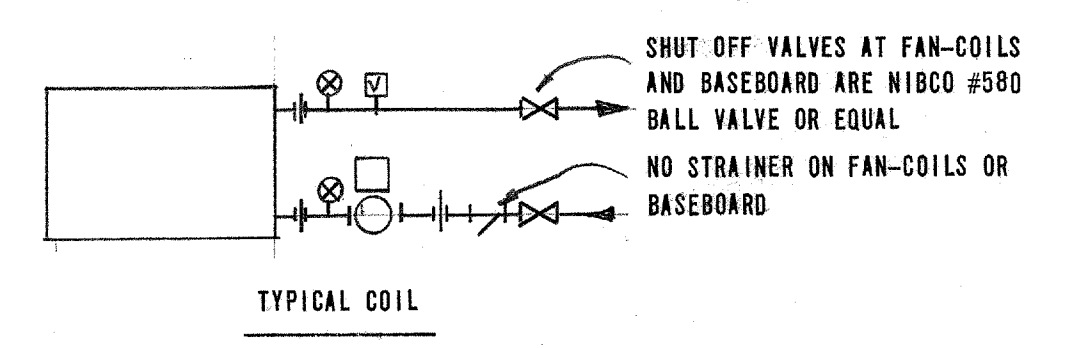
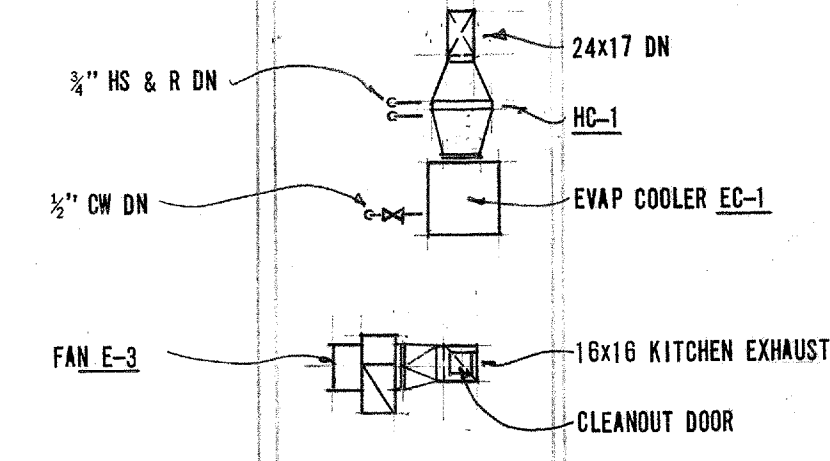


THIS DRAWING IS FOR REFERENCE ONLY AND NOT FOR CONSTRUCTION

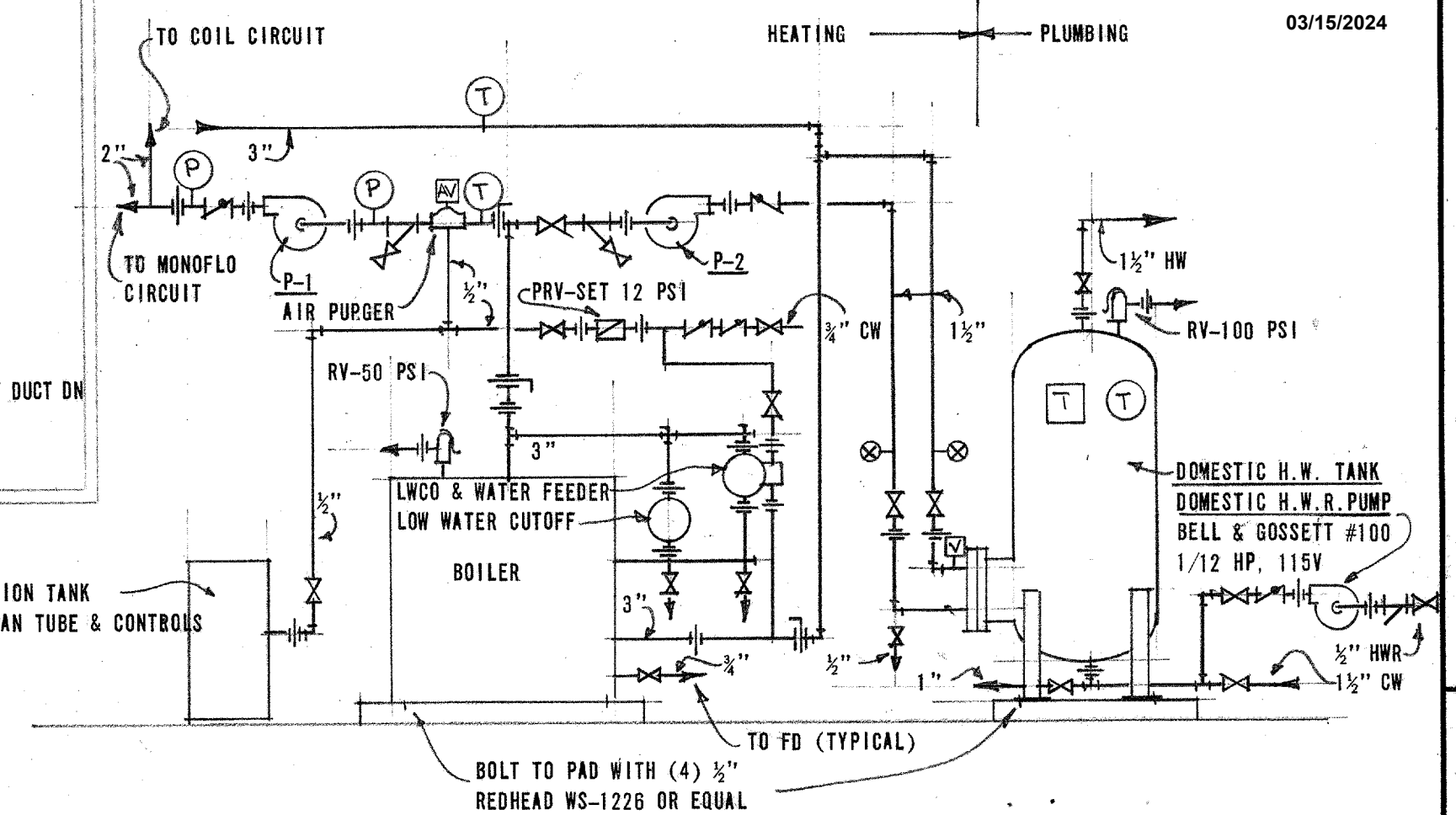
NOTE: LINE ALL DUCTS AND PLENUMS ON ROOF FROM AC-1, 2, 3
DO NOT LINE OR INSULATE DUCT FROM EVAP COOLER TO KITCHEN



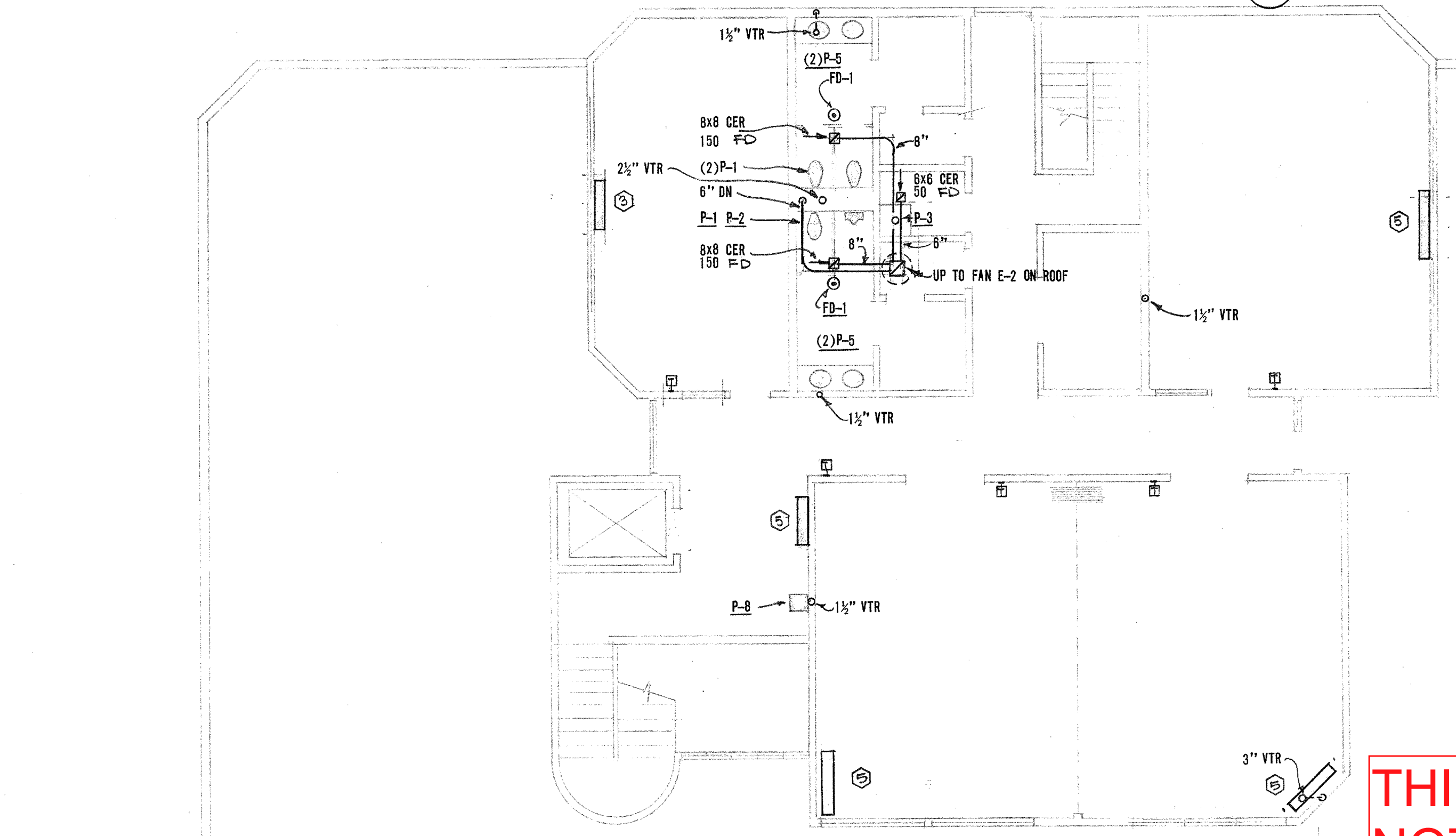
PROVIDE A REMOVABLE 20x25x2 THROWAWAY FILTER IN A PLENUM AT AC-3
PROVIDE AN 8x8 OA INTAKE WITH YD



TYPICAL COIL FITTINGS SIMILAR FOR FAN-COIL AND BASEBOARD UNLESS NOTED OTHERWISE BID SET



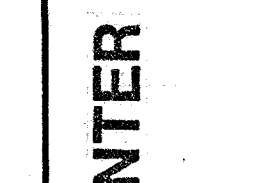
SCHEMATIC PIPING DETAILS ②



SECOND FLOOR PLAN ①
SCALE: 1/8" = 1'-0"

ROBERTS ENGINEERS
1015 KEARNEY STREET
EL CERRITO, CALIFORNIA 94530
524-1477

HARDISON AND KOMATSU ASSOCIATES - ARCHITECTS
522 Washington Street San Francisco 415-981-2025



NORTH BERKELEY SENIOR CITIZENS CENTER
BERKELEY, CALIF.

date 9/12/77
drawn
checked captain
MECHANICAL

ROOF PLAN

job no 6082

